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Montana State Health Plan 1981-1982

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MONTANA STATE HEALTH PLAN

1981-1982

STATEWIDE HEALTH COORDINATING COUNCIL

BUREAU OF HEALTH PLANNING AND RESOURCE DEVELOPMENT
DIVISION OF HOSPITAL AND MEDICAL FACILITIES
DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

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TED SCHWINDEN
GOVERNOR

State of Montana
Office of the Governor
Helena 59620

September 23, 1981

Hilary H. Connor, M.D.
Regional Health Administrator
Public Health Service
Federal Office Building
19th & Stout Street
Denver, Colorado 80294

Dear Dr. Connor:

I am pleased to transmit the Montana State Health Plan, 1981-1982, to the U.S. Department of Health and Human Services. This document represents the combined efforts of numerous Montanans, including the statewide Health Coordinating Council with the support of the Department of Health and Environmental Sciences, the Montana Health Systems Agency, and the people of Montana.

Since this plan affects Montanans, I both welcome and encourage continued discussion of the goals, objectives and actions explained in the document.

A fundamental concern of this administration is to foster an effective partnership between the state and federal government, along with the active and realistic involvement of the private sector to ensure that the rights of our people are provided. The health of our people is paramount. I trust that the private and public sectors will collectively best serve the interests of our citizens' health.

Sincerely,

Ted Schwinden

TED SCHWINDEN
Governor

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FOREWORD

Public health and well-being in Montana and America continue to improve with each generation. Infectious and communicable diseases are no longer the major threat they were at the beginning of this century. Sanitary conditions and nutrition are greatly improved, and our medical system has made significant advances in the treatment of a wide variety of diseases.

Health problems are now due mainly to degenerative diseases and accidents. Environmental hazards and behavioral factors are increasingly recognized as contributors to many of our physical and mental health problems. The health care system has grown from a small, mainly private industry to a large, complex system involving both government and private health care components. Public health services, programs for disease prevention, and programs for education and health promotion have combined with growing technology and knowledge in disease detection, treatment, and rehabilitation services to expand the range and depth of the health care system.

Continued improvement in health requires a balanced use of our resources for health maintenance and restoration. This Montana State Health Plan is intended to be a basis for decisions on current and future issues of public policy for health in Montana.*

*Appendix A contains the statutory authority for health planning and a description of the planning process and the participants in that process.

INTRODUCTION

This State Health Plan addresses some of the current health priorities in Montana. It was developed through the cooperative efforts of health care consumers, health care providers, and state government under the direction of the Montana Statewide Health Coordinating Council.

The plan describes and evaluates our policies and resources for preserving, maintaining, and restoring health in Montana. There are also recommendations for future actions to improve our health system and use its resources more efficiently.

In looking to the immediate future, the Statewide Health Coordinating Council will investigate the issues of energy and public health services.

A number of areas in Montana are expected to experience rapid population growth due to oil and coal exploration, extraction, and processing. Whether this impact is temporary or long-lasting, it will have considerable effect on the use of health care resources.

Changes in federal funding of health programs are expected to have considerable impact on local public health services. It will be necessary to reevaluate all public health services. Need, alternatives for service delivery, funding options, and state government's role in public health are all areas to be evaluated. Many services included in the "public health" category are offered through a combination of public, private, and charitable providers, and all must be considered in the determination of public health policy.

We are looking forward to continuing the spirit of cooperation that produced this plan as we start implementing its recommendations.

George M. Fenner
Administrator
Division of Hospital
and Medical Facilities

John J. Drynan, M.D.
Director
Department of Health
and Environmental Sciences

J. Melvin Williams, Chairman
Statewide Health Coordinating
Council

HEALTH STATUS

HEALTH STATUS - INTRODUCTION

The priority health problems selected for this year's Montana State Health Plan are (1) alcohol abuse and alcoholism, (2) accidents and suicides, (3) cancer, and (4) hypertension. These were selected mainly on the basis of mortality statistics, estimated prevalence and potential for intervention. The only Montana health status data that is essentially complete is mortality data from cause of death on death certificates. These health status priorities are believed to be among the most serious health problems in Montana whether mortality or morbidity data is used as a basis for selection.

More detailed analysis of health problems and need for services will require morbidity data. The actual incidence and prevalence of various diseases and physical and mental disorders are the data that are needed. Mortality data is one indirect indicator of morbidity. Tables 1 and 2 contain basic information on the leading causes of death in Montana and on recent trends in infant mortality.

Data on the incidence of communicable diseases in Montana is available, and this data is being used in designing prevention and treatment programs and assessing their results. Data on the incidence and prevalence of acute conditions--such as upper respiratory conditions--which are mainly responsible for short-term disability are also available through the United States National Health Interview Survey. Analysis of long-term disability data from that survey has been used to evaluate health status trends for the United States.[1] Taking the view that disability may be better than mortality as an indicator of health care needs, recent trends in disability were studied. Table 3 compares 1966 and 1976 disabilities as reported in the national survey. It is clear from this data that reported disability is growing faster than the population growth rate, and the causes are not identical with the diseases and conditions prominent in mortality statistics.

The disability data in Table 3 does not invalidate the present health status priorities, but does suggest that national and Montana disability information could be used to improve future health status and systems problem definition in Montana.

The authors of the paper on disability trends cite three possible consequences of the use of disability data in addition to morbidity and mortality data in health planning:

1. It would make incapacitating chronic illness (osteoarticular and neurological diseases) among the first priorities, which they are not at present.

2. It would refine policy objectives, which would then consist not only in lowering mortality but in improving the ability to function, which does not seem always to follow mortality reduction.

3. It would increase public awareness of the price that must sometimes be paid in disability in order to improve the mortality rate and vice versa; more specifically, it would reinforce efforts to see that certain technological innovations, in both diagnosis and therapy, do not give rise to more harmful consequences than real advantages, particularly when the expected advantage itself is not obtained. [2]

Alcohol problems, hypertension, heart disease and accidents are undoubtedly disablers as well as killers. In the future, however, emphasis should also be given to such conditions as diabetes, asthma, arthritis, and rheumatism that are major causes of disability, but are less significant as causes of death.

Table 1
MORTALITY RATES FOR LEADING CAUSES OF DEATH, 1980

Cause Of Death	Total Deaths	Rate (Per 100,000)
Heart Disease	2,335	296.7
Cancer	1,289	163.8
Accidents	566	71.9
Cerebrovascular Disease	557	70.8
Chronic Obstructive Pulmonary Diseases	262	33.3
Influenza and Pneumonia	193	24.5
Arteriosclerosis	139	17.7
Suicide	116	14.7
Diabetes Mellitus	103	13.0
Cirrhosis of Liver	100	12.7
Diseases of Infancy	87	11.0
Alcoholism	59	7.4
Homicide	40	5.0

SOURCE: Montana Department of Health and Environemntal Sciences, Bureau of Racords and Statistics, unpublished data.

Table 2

INFANT DEATHS AND INFANT MORTALITY RATES PER 1,000 LIVE BIRTHS BY RACE AND YEAR,– MONTANA 1974-79

Montana	1974	1975	1976	1977	1978	1979	1980
Deaths	202	187	209	183	155	151	176
Total Rate	16.5	15.5	16.6	13.8	11.4	10.7	12.4
White	181	168	186	163	125	133	150
Rate	16.3	15.6	16.5	13.6	10.3	10.6	11.8
Non-White	21	19	23	20	30	18	26
Rate	17.9	14.7	17.0	14.7	20.8	12.3	20.6

SOURCE: Montana Department of Health and Environmental Sciences, Bureau of Records and Statistics, Composite of Montana Vital Statistics and Unpublished Data.

Table 3

EVOLUTION BETWEEN 1966 AND 1976 IN THE UNITED STATES OF THE NUMBER OF PEOPLE CLAIMING TO BE LIMITED IN THEIR ACTIVITY (LONG-TERM DISABILITY) BECAUSE OF SPECIFIC IMPAIRMENTS

Selected Causes	1966 N	Rank	1976 N	Rank	Variation 1966-76 N	Percent
Total U.S. population	191,537,000		210,643,000		+ 19,106,000	+ 10
All Categories of Restriction of Activity						
All causes	21,984,000	--	30,175,000	--	+ 8,191,000	+ 37
Heart conditions	3,600,000	1	4,737,000	2	+ 1,137,000	+ 32
Arthritis and rheumatism	3,248,000	2	5,069,000	1	+ 1,821,000	+ 56
Mental and nervous conditions	1,711,000	3	1,479,000	6	- 232,000	- 14
Visual impairments	1,222,000	4	1,629,000	3	+ 407,000	+ 33
Hypertension (without heart involvement)	1,187,000	5	2,082,000	4	+ 907,000	+ 75
Asthma—Hay fever	1,065,000	6	1,448,000	7	+ 383,000	+ 36
Diabetes	562,000	7	1,539,000	5	+ 976,000	+ 174
Hearing impairments	403,000	8	754,000	8	+ 351,000	+ 87
Main Activity Impossible						
All causes	4,078,000	--	7,469,000	--	+ 3,391,000	+ 83
Heart conditions	964,000	1	1,748,000	1	+ 784,000	+ 81
Arthritis and rheumatism	639,000	2	1,307,000	2	+ 668,000	+ 105
Visual impairments	466,000	3	538,000	3	+ 72,000	+ 15
Mental and nervous conditions	400,000	4	523,000	4	+ 123,000	+ 30
Hypertension (without heart involvement)	187,000	5	508,000	6	+ 321,000	+ 172
Diabetes	163,000	6	523,000	4	+ 360,000	+ 221
Asthma—Hay fever	158,000	7	224,000	7	+ 66,000	+ 42
Hearing impairments	126,000	8	142,000	8	+ 16,000	+ 13

SOURCE: American Journal of Public Health, May, 1981, Vol. 71, No. 5, page 468.

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1. Colvez, Alain, M.D., and Blanchet, Madeleine, M.D., "Disability Trends in the United States Population 1966-1976: Analysis of Reported Causes," American Journal of Public Health, May, 1981, Vol. 71, No. 5.

2. See reference 1, "Disability Trends," p. 470.

CANCER STATUS

INTRODUCTION

According to the American Cancer Society, cancer is the second leading cause of death in the United States. It will claim 420,000 lives in 1981. According to national research, one of every five deaths in the U.S. is from cancer, and one person in four will develop cancer in his or her lifetime.[1] It is estimated that 134,000 of these 420,000 deaths might be avoided by early diagnosis and prompt treatment.[2]

Cancer is also the second leading cause of all deaths in Montana. In 1979, it claimed 1,239 lives. One of every five deaths in Montana is from cancer.

Evidence clearly shows that cancer affects every age group, both sexes and every part of the body.

RISK FACTORS

Based on epidemiological studies, the major risk factors for common cancers are:

Lung

--Heavy cigarette smoker over age 50.

--Started cigarette smoking age 15 or before.

--Smoker working with or near asbestos.

--Level of carcinogens in ambient air.

Skin

--Excessive exposure to sun.

--Fair complexion.

--Work with coal tar, pitch or creosote.

Uterine-Endometrial

--Unusual bleeding or discharge.

--Late menopause (after age 55).

--Diabetes, high blood pressure and overweight.

--Aged 50 and over.

Uterine-Cervical

--Unusual bleeding or discharge.

--Frequent sex in early teens or with many partners.

--Low socioeconomic background.

--Poor care during or following pregnancy.

Breast

--Lump or nipple discharge.

--History of breast cancer.

--Close relatives with history of breast cancer.

--Over age 35; especially over 50.

--Never had children; first child after age 30.

Oral

--Heavy smoker and drinker.

--Poor oral hygiene.

Ovary

--History of ovarian cancer among close relatives.

--Aged 50 and over.

--Never had children.

Prostate

--Aged 60 and over.

--Difficulty in urinating.

Stomach

--History of stomach cancer among close relatives.

--Diet heavy in smoked, pickled or salted foods.

Colon-Rectum

--History of rectal polyps.

--Rectal polyps run in family.

--History of ulcerative colitis.

--Blood in stool.

--Over age 40.

(Source: Cancer Facts and Figures, 1980. American Cancer Society, 1981.)

It is estimated that 60 to 80 percent of all cancers are caused by occupational/environmental factors.

AGE

Cancer affects every age group, but strikes more frequently with advancing age. However, it is a leading killer in the 3 to 14 year age group nationally.

In 1900, tuberculosis was the most frequent cause of death in the U.S.--cancer ranked eighth. As treatment of infectious diseases improved, the number of deaths due to infectious diseases decreased and the average life-span lengthened. Cancer, a disease primarily of middle and old age, has risen to second place partly because Americans are living longer now than in 1900.

Changes in the age distribution of the population accounted for a large portion of the increase in cancer death rates between 1950 and 1976. The age-adjusted cancer death rate increased by only 5.5 percent between 1950 and 1976, compared with an increase of 26 percent in the crude rate. For people under 45, the cancer death rate has actually been decreasing since about 1950, while for each successive five-year age group, from 45 through 84, cancer mortality increased. For those 65 and over, cancer death rates increased 15 percent.

Table 1, Leading Causes of Death by Age Group, Montana, 1979, indicates that cancer is the number two killer in all age groups except 1 to 4 and 15 to 24 years.

SEX

In general, between the ages of 20 and 40, cancer is three times as common in women as men. However, between the ages of 60 and 80, men account for more cancer cases.[3]

Table 1
LEADING CAUSES OF DEATH BY AGE GROUP – MONTANA 1979
(By place of residence)

Cause of Death	Number of Deaths
All Ages	
1. Heart Disease	2,302
2. Cancer	1,240
3. Accidents	596
4. Stroke	588
1 to 4 Years	
1. Accidents	19
2. Congenital Anomalies	4
3. CNS** Diseases	3
4. Heart Disease	2
5 to 14 Years	
1. Accidents	34
2. Cancer	3
3. Congenital Anomalies	3
4. Others	12
15 to 24 Years	
1. Accidents	169
2. Suicide	25
3. Homicide	14
4. Cancer	10
25 to 44 Years	
1. Accidents	155
2. Cancer	53
3. Suicide	41
4. Heart Disease	29
45 to 64 Years	
1. Heart Disease	451
2. Cancer	354
3. Accidents	98
4. COPD*	43
65 and Over	
1. Heart Disease	1,812
2. Cancer	820
3. Cerebrovascular Disease	541
4. COPD*	160

*COPD = Chronic obstructive pulmonary disease and allied conditions.
**CNS = Central nervous system.

SOURCE: Montana Department of Health and Environmental Sciences, Bureau of Records and Statistics, unpublished data.

For men, there has been a much higher incidence of lung cancer--an increase of 125 percent in 25 years. Slight increases occurred for cancer of the colon, prostate and bladder. Stomach cancer decreased. The cancer death rate for men has increased more than 20 percent for whites and more than 60 percent for blacks from 1950 to 1977. This is mainly the result of lung cancer, which more than tripled from 18 per 100,000 deaths in 1950 to 55 per 100,000 deaths in 1977.[4]

For women, a decrease in incidence has been noted in uterine cervix and stomach cancer. Lung cancer has steadily increased. From 1950 to 1977, the death rate declined by nine percent for whites and seven percent for blacks. This is due to a sharp reduction in deaths caused by uterine cervix cancer, attributed to increased use of Pap tests and checkups. However, the lung cancer rate has nearly quadrupled, from 4 per 100,000 to 15 per 100,000.[5]

Overall since 1949, more men than women have been dying of cancer each year; in 1980, about 54 percent male, 46 percent females. Cancer is the leading cause of death among women aged 30 to 54.[6]

SOCIOECONOMIC STATUS

Persons in lower socioeconomic groups have about average incidence and mortality rates for cancer of all types, and the incidence is somewhat higher among males than females. The association with low socioeconomic status is quite marked for cancer of the cervix, esophagus, and stomach, but small for female breast cancer. The lowest income group has the highest incidence of respiratory cancer. Differences in lifestyle, quality of medical care, and degree of exposure to carcinogenic materials are thought to be contributing factors.

An association between occupation and the occurrence of cancer was recognized before the advent of the modern industrial era. Miners, laborers, and transportation workers have an increased risk of cancer, while men in agricultural pursuits have comparatively low mortality rates for all but skin cancer.[7] Many occupational groups are under study, including vinyl chloride workers, painters, and workers in rubber plants. Asbestos workers have a high lung cancer risk.[8]

DIET AND NUTRITION

Although there is no definitive proof of direct causation of cancer by diet, the accumulating scientific data do indicate that certain cancers are related to dietary habits. Cancers

of the stomach, colon, gastrointestinal tract, pancreas, and liver have all been correlated with certain dietary components. High incidences of colon and breast cancer occur in population groups with a relatively high dietary fat intake.[9] The association between excessive alcohol consumption and cancer of the buccal cavity, pharynx, larynx, and esophagus is now well established.[10] There also appears to be a correlation between cancer of the colon and dietary fiber intake.

ENVIRONMENTAL HAZARDS

Recent studies have shown that bronchogenic carcinoma among members of copper mining and smelting communities is of prime concern in Montana.[11] According to the 1981 Montana Air Pollution Study (MAPS), it is strongly suspected that exposure to high levels of ambient air pollution has contributed to high death rates from lung cancer in Deer Lodge and Silver Bow counties. However, this finding cannot be proven conclusively because the strong presence of smoking overwhelms all other variables analyzed. MAPS suggests a synergistic effect of air pollution exposure and heavy smoking may be likely. This likelihood is supported by 1) the findings of decreased pulmonary function measurements among school children in Anaconda-Deer Lodge and Butte-Silver Bow, and 2) the presence of high levels of carcinogenic substances in ambient air samples from both communities.[12]

Numerous homes in the Butte area have significantly elevated concentrations of radon decay radiation. The radon source is believed to be the low grade uranium contained in the Butte geology. The Department of Health and Environmental Sciences' Occupational Health Bureau is conducting a radiation study in the Butte area. The study will identify radiation sources and assist in the development of reasonable preventative actions to prevent hazardous levels of radon in new construction and reduce radon levels in existing structures.[13] The Butte Radiation Study was funded for the 1980-81 biennium by state resources. The ongoing work is being accomplished through federal grants awarded by the Environmental Protection Agency and the Department of Housing and Urban Development.

MEASURES OF POPULATION AFFECTED

Twenty-five percent of today's healthy population will have some form of cancer during their lifetimes.[14] It is estimated that 75 percent of cancer incidence could be prevented if effective action were taken against known causative factors.[15]

Table 2
CANCER DEATH RATES PER 100,000 POPULATION
BY SELECTED SITES

Cancer	1960-62	1970-72	1978-79
Uterus/Breast	14.8	17.9	17.9
Colon/Rectum	20.0	20.2	20.2
Lung	19.2	28.5	34.9
Oral	2.1	1.4	1.7
Prostate	9.9	10.5	13.5
Stomach	10.2	7.6	5.9
Pancreas	8.1	9.4	8.4
Leukemia	7.5	8.9	5.0

SOURCE: Montana Department of Health and Environmental Sciences, Bureau of Records and Statistics, unpublished data.

ESTIMATED PREVALENCE OF CANCER IN MONTANA

There will be approximately 2,400 new cancer cases in 1981. About 800 of those will be alive five years from now--about 144 will die who might have been saved by diagnosis and prompt treatment (based on national calculations). Approximately 1,300 people will die from cancer in 1981.[16]

Table 2 shows cancer deaths by selected site for three selected periods in Montana. There has been a startling 82% increase in lung cancer deaths from 1960 to 1979. All other cancer deaths have remained fairly stable, with the exception of stomach cancer and leukemia, which have decreased 42 percent and 33 percent respectively.

Statewide cancer death rates remained stable during the years 1972 and 1977 at 15.6 per 10,000 population. Cancer death rates increased in the Eastern and South Central Regions, but decreased in the North Central, Southwestern and Northwestern Regions.

The 1977 cancer mortality rate for Montana was 155.6 per 100,000, compared to 178.7 nationally. Percent of total deaths was 18.7 percent, compared to 20.4 percent nationally.

MORBIDITY

According to data available from the Montana State Cancer Registry, 1969 to 1979, breast cancer is the most prevalent, followed by colon-rectum, cervix, lung, and prostate. New cancer cases by sites, for Montana, 1980, by the American Cancer Society, estimate lung and colon-rectum at 350; followed by 300 breast cancer cases. Prostate is fourth with 250.[17]

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1. Cancer Facts and Figures, 1979, American Cancer Society, 1980.

2. Cancer Facts and Figures, 1980, American Cancer Society, 1981.

3. See reference 1, Cancer Facts and Figures.

4. See reference 1, Cancer Facts and Figures.

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6. Montana Department of Health and Environmental Sciences, Bureau of Records and Statistics, Vital Statistics, 1978.

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13. Butte Radiation Study, Report to the 1981 Montana Legislature, Occupational Health Bureau, Department of Health and Environmental Sciences, 1980.

14. See reference 1, Cancer Facts and Figures.

15. Raven, R., "Cancer Prevention - The Key to Control," Royal Society of Health Journal, 92, December, 1972.

16. "Cancer Statistics, 1980," Ca-A Cancer Journal for Clinicians, January/February, 1980.

17. See reference 16, Ca-A Cancer Journal for Clinicians.

VIOLENT DEATHS: ACCIDENTS AND SUICIDES

Introduction

In 1979, accidents were the third leading cause of death in Montana and suicides were eighth. This is the first time on record that accidents ranked above cerebrovascular disease in the ten leading causes of death. Accident rates are markedly higher in Montana (75.8 per 100,000 population) than in the rest of the nation (47.7 per 100,000 population). Suicide rates are also higher in Montana, with a rate of 15.6 per 100,000 compared with 13.3 per 100,000 in the rest of the United States.[1,2]

Accidents and suicides are considered the leading causes of death when taking life-years lost into account. While the "major killers"--heart disease, cancer, and cerebrovascular disease--accounted for 61 percent of Montana's deaths in 1977, they resulted in an average number of 11.91 life-years lost. In comparison, the average number of life-years lost through accidents and suicides was 40.45 and 32.85 years, respectively.

Violent causes of death and disability are the consequence of human behavior and generally are preventable. Because violent deaths continue to be excluded from the day-to-day concerns of most public health programs, the Statewide Health Coordinating Council (SHCC) selected accidents and suicides as a health status priority for this State Health Plan. Due to the prevalence and serious consequences of accidents and suicides, they are included with other health status problems and health services. Changes in resource allocations may be needed to better address this important health problem.

More than 100,000 Americans lost their lives through accidental injuries in 1977--nearly half from motor vehicle accidents, the rest from falls, burns, poisonings and other causes. In 1977, too, 65 million people suffered non-fatal accidental injuries requiring medical treatment--and in terms of damage, injury and lost productivity, the estimated cost was $62 billion.[3]

Educational approaches advocating changes in behavior have been generally ineffective in preventing accidents among those at highest risk--young children, teenage males, problem drinkers and the elderly.[4]

Suicide is the third leading cause of death among teenagers and young adults, some 5,600 of whom took their own lives in 1977. The most frequently used suicide methods include firearms, drugs, and motor vehicle exhaust gases. Firearm suicides have been increasing at a much faster rate than suicides by other means. Of the 29,000 suicides recorded in the United States each year, more than 80 percent are thought to be precipitated by depressive illness.[5]

It is estimated that five million Americans have made one or more unsuccessful attempts at suicide, and that ten percent of this group will ultimately succeed. Some estimates claim the actual suicide rate is three times the reported rate.

Unlike the case with accidents, there is persuasive evidence that early detection and treatment can markedly influence suicidal tendencies. One approach to this problem is hotlines--and prompt referral to sources of professional help when problems are noted.

Personal attitudes, age, sex, race, socioeconomics, geographic distribution and knowledge are potential factors in identifying high-risk groups. Expectations for programs in accident and suicide prevention must be geared to the realities of these factors so that unnecessary death and disability can be prevented.

PERSONAL ATTITUDES

Formidable barriers exist in the attitudes of many people, especially in the young, about risk. They have the attitude that they have personal liberties and should be allowed personal responsibility for risk. Many pressures undoubtedly are involved in attitudes; broad physical, psychological (ambivalence about wanting to live or die), social (including peer) and family changes all have a powerful impact on individuals. Alcohol and drug abuse are broadly accepted behaviors with major implications in accidents and suicides.

SOCIOECONOMIC

Accidents and suicides are relatively common across all social and economic levels. The threat of economic loss due to decreased consumption of products (alcohol, drugs, firearms) and social loss (friends, peer support) has produced considerable resistance to efforts to improve safety. Requirements for sometimes costly measures to protect potential victims have led to vigorous opposition to efforts to promote health and prevent accidents and suicides.

KNOWLEDGE

Public knowledge of, and involvement in, prevention activities are growing, but there is still a need to learn more. Better measures are needed to provide people with information to motivate them and provide them with the skills to control behavior.

GEOGRAPHIC DISTRIBUTION

Motor vehicle accidents and suicides are distributed unevenly across the United States. The highest rates of motor vehicle deaths in 1977 occurred in the western states of Wyoming (first) New Mexico (second) and Montana (third). The same holds true for injuries. The annual rate for injuries per 100 persons in the West was 41.7, while the rates in the North Central, South, and Northeast were 33.4, 33.2, and 31.1, respectively.[6] In 1977, Montana's suicide rate was 18.8 per 100,000 population, followed by Colorado (17.5), Wyoming (13.8), Utah (13.7), and North Dakota (10.9). The national rate was 13.3.

AGE

Accidents are the leading cause of death for the population 1 to 34 years of age in the United States and Montana. Of all deaths in Montana in 1979, 57.6 percent of children 1 to 14 years, 69.0 percent of young adults 15 to 24 years, and 51.8 percent of those 25 to 34 years were attributed to accidents. The major component in the accident category is motor vehicle accidents--52.2 percent of the total; 78.1 percent of those 15 to 24 years; and 57 percent of those 25 to 34 years.[7] Of the total killed in motor vehicle accidents in 1979, 42.5 percent had been drinking; 52.8 percent of drivers killed had been drinking; 35.3 percent of pedestrians killed had been drinking; and 26.7 percent of passengers killed had been drinking--all down from 1977. In 1979, 31.9 percent of all non-motor vehicle accidental deaths were in the 65 to 85 and over years of age population. Importantly, 13.3 percent of the total non-motor vehicle accidental deaths were in the 85 or over age group alone. Non-motor vehicle accidents were also high among the 1 to 34 years of age population.

The age distribution in suicide has changed from the older population (responding perhaps to terminal illness) to the young population in the United States and in Montana. Of the total suicides in 1979, 44.7 percent were in the 15 to 34 years of age population, and 18.7 percent in the 65 to 85 or older age population in Montana. The 20 to 29 and 60 to 64 years of age groups alone accounted for 37.4 percent of the total suicides.

SEX

Young men are at particular risk, their death rate being approximately three times that of young women in both accidents and suicides. The same holds true for adult suicides, with three times as many men as women taking their own lives.

RACE

The death rate for accidents continues to be considerably higher for the Native American population than for the total U.S. population (155.5 per 100,000 versus 44.7 in 1977). The accident death rate for Native Americans 25 to 54 years of age was almost five times that for the total U.S. population of comparable ages. The suicide death rate was also 2.2 times higher in 1977. The suicide rates were higher only for those under 45 years of age, with the greatest differentials occurring in the group 15 to 24 years of age.[8]

In Montana, too, the death rate for accidents is considerably higher for Native Americans than for the total population (144.6 per 100,000 versus 75.9 in 1979). Of the total Native American deaths, 24.8 percent were caused by accidents and 60 percent of the accident-related deaths were motor vehicle accidents. The rate of suicides was lower (15.6 per 100,000) for the white population than for Native Americans (16.1 per 100,000) in 1979.

MORTALITY

If no child, youth or young adult had died in an accident or suicide in 1979, the death rate for the 1 to 34 years of age group would have been reduced by almost three-fourths. Data is not available to fully assess those who suffered serious injury in Montana.

Compared to national statistics, Montana's health status regarding accidents and suicides is grim. The death rate for all accidents nationally was 53.7 in 1970 and 48.2 in 1977.[9] As shown in Table 1, the death rate for all accidents in Montana was 82.2 in 1970 and 78.4 in 1977.

As can be noted, motor vehicle accident mortality for the total population dropped about nine percent from 1973 to 1974 and remained at this level for two additional years. These years of lowered rates correspond to the early stages of the "55 miles per hour" speed limit. However, the death rate increased by more than ten percent from 1977 to 1979; perhaps this is an indication of relaxed adherence to or enforcement of the speed limit.

In 1970, there were 291 reported motorcycle accidents, with 249 injuries and eight deaths. In 1979, these numbers had risen to 596 reported accidents, 632 injuries and 20 deaths, as shown in Table 2. When considering only the 27,392 licensed motorcycles in 1979, the death rate was 73.0 per 100,000 licensed motorcycles and the injury rate was 2,307.2 per 100,000.

Table 1

NUMBER AND CRUDE RATE OF VIOLENT DEATHS PER 100,000 POPULATION, 1970-79 — MONTANA AND U.S.

Underlying Cause of Death	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	% of Total Deaths 1979
Total All Accidents	571	609	635	611	559	584	579	574	559	596	9.2
Montana	82.2	85.8	88.3	84.7	76.1	78.1	76.9	75.4	71.2	75.8	
U.S.	56.4	55.0	55.4	55.2	49.5	48.4	46.9	47.7	NA	NA	
Total Motor Vehicle	290	310	360	324	287	266	291	302	276	311	4.8
Montana	41.8	43.7	50.1	44.9	39.0	35.6	38.6	39.7	35.1	39.5	
Total Other Accidents	281	299	275	287	272	318	288	272	283	285	4.4
Montana	40.5	42.1	38.2	39.8	37.0	42.5	38.2	35.7	36.1	36.2	
Total Suicide	79	117	87	108	122	112	129	143	122	123	1.9
Montana	11.4	16.5	12.1	15.0	16.6	15.0	17.1	18.8	15.5	15.6	
U.S.	11.6	11.7	12.0	12.0	12.1	12.7	12.5	13.3	NA	NA	
TOTAL ALL CAUSES	6,597	6,860	6,896	6,870	6,552	6,539	6,733	6,397	6,486	6,471	
MONTANA RATE	950.0	966.2	959.1	952.8	891.4	874.2	894.2	840.6	826.2	823.3	
TOTAL MONTANA POPULATION (In thousands)	694.4	710.0	719.0	721.0	735.0	748.0	753.0	761.0	785.0	786.0	

SOURCE: Department of Health and Environmental Sciences, Bureau of Records and Statistics.

Table 2
MOTORCYCLE ACCIDENT STATISTICS, 1970-79 – MONTANA

Year	Accidents	Killed	Injured
1970	291	8	249
1971	454	18	393
1972	471	25	523
1973	486	9	536
1974	471	13	510
1975	430	15	461
1976	404	20	416
1977	458	9	483
1978	545	23	560
1979	596	20	632

SOURCE: Montana Department of Justice, Montana Highway Patrol Report, 1979.

There is no motorcycle helmet law in Montana. Some authorities in the state believe there is no question that wearing a helmet helps prevent serious injury or death. A helmet bill was introduced in the 46th Legislative Session in 1979 and was defeated. Nationally, helmets are worn 90 to 99 percent of the time in states which require them and are used less than 60 percent of the time in states without such a law. In Colorado, Kansas, and South Dakota--states for which pre-repeal and post-repeal data are available--head injuries rose and fatal head injuries doubled after helmet laws were repealed.[10]

The motorcycle helmet law has been the most effective device for protecting riders from death or serious injury in a collision. Riders using safety helmets have less than half as many moderate to severe head injuries and three to nine times fewer fatal head injuries.[11]

In 1979, accidents other than motor vehicle accounted for 47.8 percent of the total accidental deaths--down from 49.2 percent in 1970 (see Table 1). Of the total non-motor vehicle accidental deaths, 31.9 percent were persons 65 years of age and older, with falls the leading cause as shown in Table 3. The 85 or older years of age group accounted for 13.3 percent of all non-motor vehicle accidental deaths.

The Eastern Region has the highest accidental death rate (90.2 per 100,000) and South Central has the lowest (57.4 per 100,000), as shown in Table 4; however, both are well above the national rate of 47.7 per 100,000 population. It should be noted, also, that North Central had the highest motor vehicle accident death rate (45.6) with Eastern following close behind (42.6). Southwestern was the lowest with a rate of 34.3 per 100,000--below the national average of 39.5.

Suicide has ranked among the top ten leading causes of death for seven consecutive years. Since 1955, Montana's suicide rate has been consistently higher than the national rate and has increased 25.8 percent from 1955 to 1977, as can be noted in Table 1.

In the 15 to 34 years of age category, suicide ranked as the second leading cause of death in 1979; it is superseded only by accidents. Firearms were used in 68.5 percent of the suicides in Montana--more than used in homicides nationally.

Table 5 shows the regional number of suicides and death rates. Even the most rural region, Eastern, had an average of 14.7 deaths per 100,000 in the selected years; however, its average was the lowest among the regions. Northwestern had the highest average (18.3 per 100,000) followed by Southwestern (16.6 per 100,000 population).

Table 3
ACCIDENTAL DEATHS – BY CATEGORY, 1973-79 – MONTANA
(By place of residence)

Year	Falls	Drowning	Fire and Explosion	Motor Vehicle	Other Accidents	Total Accidents
1973	12.3%	3.8%	4.3%	53.0%	26.6%	611
1974	13.4%	6.3%	3.0%	51.7%	25.6%	599
1975	13.5%	5.5%	5.5%	48.3%	27.2%	584
1976	12.3%	5.5%	3.8%	50.3%	28.1%	579
1977	11.3%	4.7%	4.9%	52.6%	26.5%	574
1978	13.2%	5.2%	3.2%	49.4%	29.0%	559
1979	13.3%	4.5%	4.5%	52.2%	25.5%	596

SOURCE: Montana Department of Health and Environmental Sciences, Bureau of Records and Statistics, Montana Vital Statistics.

Table 4
ACCIDENTAL DEATHS AND RATES BY REGION, 1979 – MONTANA

Region	Population	Accidental Deaths	Motor Vehicle Deaths	Accident Rate per 100,000 Pop.
Eastern	98,700	89	42	90.2
North Central	149,100	121	68	81.2
South Central	160,200	92	55	57.4
Southwestern	186,100	135	66	72.5
Northwestern	191,600	159	80	83.0

SOURCE: Department of Health and Environmental Sciences, Bureau of Records and Statistics, Unpublished Data.

Table 5
SUICIDE DEATHS AND RATES, SELECTED YEARS 1973-79 — MONTANA

Region	1973	1975	1977	1979
Eastern				
Total	9	14	19	10
Rate	9.7	20.0	19.1	10.1
North Central				
Total	20	21	26	26
Rate	13.6	14.1	17.4	17.4
South Central				
Total	26	16	26	25
Rate	18.2	10.8	17.0	15.6
Southwestern				
Total	24	27	34	34
Rate	13.7	14.8	19.4	18.3
Northwestern				
Total	29	34	38	28
Rate	17.8	19.6	21.3	14.6

SOURCE: Department of Health and Environmental Sciences, Bureau of Records and Statistics.

Unfortunately, the suicide rate has not stopped climbing. Many more suicides were attempted but not reported as such, or not identified as suicidal efforts. Some estimates indicate that the actual suicide rate is three times the reported rate.[12]

MORBIDITY

Nationally, discharge rates from hospitals for accidents increased during the period from 1972 to 1977. Montana-specific data is not available to assess discharge morbidity. However, in the Health Status Overview of this State Health Plan, it was noted that Montana has the highest rate of bed-disability days in Region VIII, which correlates with the high accident rate. It was also noted that there were 40.3 male and 28.9 female injuries per 100,000 persons from July, 1976, to June, 1977, in the U.S. We are aware that accidents account for a major proportion of illness and restricted activity in Montana, and that the high costs of disabling injuries, the burden on families and the demands on health care resources are felt by society as a whole.

Cases of disability due to work-related injuries in Montana exceeded 32,000 in 1978, and increased by over 27 percent in ten years.[13] In FY 1979, the Workers' Compensation Division reported 34,295 work-related accidents, representing an increase of about seven percent over 1978.

SUMMARY

The importance of accidents and suicides as a public health concern in Montana should be underscored. Almost 600 people lost their lives through accidental injuries in 1979--more than half of them from motor vehicle accidents, the rest from falls, burns, poisonings and other causes. We don't know how many people suffered non-fatal accidental injuries requiring medical treatment, nor do we know--in terms of damage--about injury and lost productivity, or the cost of accidents.

The greatest risk factor for fatal accidents, injuries, suicides and suicide attempts is alcohol use. The death and injury toll includes not only alcoholics or problem drinkers but also involves the occasional drinker who is temporarily out of control.

Health protection must extend beyond traditional disease control measures and include protection against environmental and occupational hazards and reduction of accidental injuries. Educational strategies directed toward the concept of individual responsibility for the daily decisions which affect health must be emphasized.

Helping to prevent suicide is a particularly important task. Mental health professionals are becoming more skillful in the early detection and management of suicidal tendencies. There is

a need for hotlines--and prompt referral to sources of professional help when problems are noted.

Lastly, emergency medical services system development to provide appropriate levels of emergency care for accident and suicide victims could reduce mortality and morbidity due to accidents and suicides.

Improvement in the health status of accident and suicide victims can come through the health care delivery system. The ways in which programs are dealing with this very important health status issue, and the extent to which they can reduce the individually and socially devastating effects of failure to cope adequately with suicides, accidental deaths and injuries will be addressed in several components in this State Health Plan.

RECOMMENDATIONS

Although the following recommendations are not directly concerned with the health care system, they could have a considerable impact on health in Montana.

1. Emphasis and support should be given to programs designed to get drunk drivers off the road. These measures would include: stricter enforcement of drunk driving statutes and license suspension provisions; court ordered driver schools; school education programs, rides home from bars, etc.

2. Montana's motorcycle helmet law should be reinstated.

3. Use of automobile seat belts and child restraints should be encouraged through public education programs provided through appropriate state or voluntary organizations.

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ALCOHOLISM AND ALCOHOL ABUSE

INTRODUCTION

Many definitions have been proposed in an attempt to clarify what is meant by the terms "alcoholic" and "problem drinker," but none are universally accepted. Most currently accepted definitions emphasize the functional problems associated with alcohol use rather than on how much a person drinks. Whitfield and Williams have suggested that alcoholism be defined as "... alcohol use to such an extent that it interferes recurringly in the functional life of the individual, manifested by health, family, job, educational, legal or emotional difficulties as a result."[1] The American Medical Association adds to this definition the alcoholic's preoccupation with alcohol and loss of control over its consumption. Problem drinkers are characterized by one or more physical, mental, or social alcohol-related problem(s), but loss of control over drinking is not apparent.

Alcoholism is recognized as an illness but there are a wide variety of views with respect to the element of personal responsibility in both cause and treatment.

Almost half the people in this nation occationally drink alcoholic beverages. A recent survey showed most had tried it before they were ten years old. Among high school students, 50 to 85 percent admit they have tried alcohol in some form.

Having a drink before dinner is a common practice among two-thirds of all adults.[2]

According to the 1979 National Status Report published by the National Institute on Alcoholism and Alcohol Abuse, Montana ranks third in the nation in per capita consumption of beer, and eleventh in overall consumption of alcoholic beverages.

Alcohol consumption, as measured by beverage sales, has risen steadily in Montana during the last two decades. The amount of alcohol sold has risen from 2.79 gallons per capita in 1970 to 3.65 gallons in 1979.[3] There has also been a shift in the types of alcoholic beverages sold, with a marked increase in wine.

According to the State Alcohol and Drug Abuse Division, there are an estimated 101,000 alcohol abusers in Montana among a total population of 786,690.[4]

A more detailed understanding of the population of alcohol abusers may be obtained through examining the risk factors associated with alcoholism and alcohol abuse, and the groups experiencing alcohol-related medical, social and legal problems.

Those factors which place an individual at high risk of becoming a problem drinker include personal characteristics, alcohol availability, drinking context, geographic variation, and consumption trends.[5] These factors vary for different age, sex and racial groups.

AGE

Alcohol has no respect for age. Research on the effects of alcohol consumption on pregnant women has demonstrated that the fetal alcohol syndrome is a clinically observable abnormality. Nationally, there are an estimated 3.33 million 14 to 17 year old problem drinkers, and at least ten million people in the adult population who can be identified as problem drinkers or alcoholics.[6]

In Montana, 43 percent of the persons admitted to alcohol programs in 1980 were under the age of 30, compared with 37 percent in 1979. Clients under the age of 20 increased from 12 percent to 15 percent. Data over the last few years substantiates that persons are seeking treatment at younger ages. Admissions to these programs are also high for the 45 to 64 year age group (1,210 or 23 percent), with few people over 65 years of age being admitted to programs (184 or 3 percent).[7]

SEX

Seventy-five percent of all persons admitted with a primary problem of alcohol are men. Women continue to be an underserved population, comprising only one-fourth of all admissions; however, the percentage of women admitted to treatment programs increased from 23 percent in 1979 to 25 percent in 1980.

RACE

Among all special population groups in the United States, Native Americans have the highest reported frequency of problems associated with drinking. The cultural and traditional norms that have reinforced Native American drinking patterns also have served as barriers to treatment.

A report prepared for the Alcohol and Drug Abuse Division indicates that alcohol problems occur much more frequently in the Native American population in Montana than in the general population. Alcohol-related problems are considered the primary health issue for this population group.

While Native Americans comprise about 4.2 percent of the state's population, they account for 19 percent of all admissions to state approved alcohol programs.[8]

ECONOMIC STATUS

In 1980, 65 percent of those admitted to alcohol programs were unemployed, and only 30 percent had full-time employment. The average monthly income for all clients was less than $300, and 55 percent reported having no insurance coverage.

From these facts it appears that there are many Montanans in need of alcohol services who cannot afford it, and this grim economic truth should be taken into account in future needs assessments and alcohol services planning.

MORTALITY

From 1969 to 1980, deaths from cirrhosis of the liver have increased only slightly from a rate of 12.5 per 100,000 population in 1969 to 12.7 in 1980.[9]

Other deaths caused or contributed to by alcohol abuse are also quire significant. Especially noteworthy is the large number of highway accidents, suicides and homicides caused or contributed to by alcohol. In 1979, according to the Alcohol and Drug Abuse Division, 43 percent of all highway fatalities had been drinking and 53 percent of all drivers killed had been drinking. A more thorough discussion of accidental deaths can be found in the component "Violent Deaths: Accidents and Suicides."

MORBIDITY

Data on individuals in treatment is most readily available through the publicly funded alcoholism treatment programs reporting to the Alcohol and Drug Abuse Division. Accurate figures are not presently available for privately funded outpatient or acute care services, or for acute care services which are publicly funded. Outpatient maintenance services such as those offered through Alcoholics Anonymous are not available.

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HYPERTENSION

Introduction

Hypertension, which is abnormally high blood pressure (HBP), has been called the single largest causative factor in all deaths. It is a very common health problem which has been estimated to affect approximately 15 percent of the Native American population[1,2] and 15 percent of the white population.[3] In all, it is estimated to affect one of every seven American adults.[4]

Hypertension is a very serious health condition. It is the most significant risk factor in producing: artherosclerotic phenomena (hardening and clogging of arteries in the heart, brain, legs, and other areas); angina pectoris (chest pain associated with poor blood circulation to the heart); ischemic heart disease, and myocardial infarction (heart attack); congestive heart failure; stroke; kidney disease and kidney failure, and hypertensive heart disease (enlargement of the heart and main pumping chamber).[5] Hypertension-related diseases account for 42.5 percent of total deaths in Montana, although it is the direct cause in only 0.2 percent of deaths.

In addition to increasing the risk of heart attack, hypertension decreases the chances for survival following a heart attack. Furthermore, hypertensive survivors of heart attacks have twice the risk of a repeat attack, and more than five times the risk of dying from heart disease, during the following five years.[6]

Hypertension was selected as a health status priority by the Statewide Health Coordinating Council (SHCC) because of its relevance, serious consequences and amenability to early detection and treatment.

The Montana High Blood Pressure Control Advisory Council was established in 1980. Among its duties is the development of a comprehensive high blood pressure control plan to provide direction and guidance for high blood pressure control at the community level.

Treatment for hypertension has been effective in reducing its serious consequences.[7] The problem of HBP has won broad public recognition. The federal government has supported both basic research and clinical investigation for the past ten years. The High Blood Pressure Education Program conducted a nationwide inventory of HBP control activities, and through it, identified numerous organizations, including the Heart Association, public health departments, hospitals, regional medical programs, health planning agencies, health centers, medical schools, professional organizations, the Kidney Foundation, insurance companies, and non-health organizations such as businesses and labor, which are involved in HBP control programs.

DEFINITIONS

--Essential or primary hypertension has no known cause although there is evidence to support associated factors such as age, weight, smoking, diet, and family history.

--Secondary hypertension results from an identifiable organic malfunction such as renal disease or vascular abnormalities.

--Labile hypertension is known as intermittently high blood pressure and is related to increased risk of developing essential hypertension. Increased blood pressure during pregnancy may be associated with increased risk of fixed blood pressure elevation later on.[8]

RISK FACTORS

Weight

The association between weight and weight gain and hypertension is very strong and consistent. The correlation is stronger among whites than other races, except in the grossly overweight, where racial differences disappear.[9] Researchers are hypothesizing that it is the high sodium intake in obese patients which actually produces hypertension.[10]

Salt

There is believed to be a relationship between salt consumption and high blood pressure. Studies have shown that areas and population groups with low sodium consumption also have a low prevalence of hypertension. However, other differences between these population groups might account for differences in prevalence of hypertension.[11] More convincing evidence on the relationship between sodium consumption and hypertension is found in studies which show that salt restriction and the effects of salt elimination by means of diuretics reduces blood pressure in many instances.[12] Recent studies indicate that the real risk factor may not be high sodium, but rather low potassium or the sodium/potassium ratio.[13]

Sex

The incidence of hypertension in whites is higher in males than in females before age 55, but by age 65 it is equal; by age 75, the incidence of hypertension is higher among women than among men.[14] There is no known sex difference in prevalence of HBP in Native Americans.

It is estimated that 117,500 Montanans (15 percent of the 1980 census population of 786,690) have hypertension. Extrapolation of national statistics suggests that approximately 40,000 Montanans are unknown hypertensives, and perhaps another 25,000 are not being treated and/or are being inadequately controlled.[15]

Age

Blood pressure tends to increase with age in the United States as in most industrialized nations. This phenomenon is so common it is considered inevitable, and even normal.[16] This sort of thinking is demonstrated in the National Heart, Blood, and Lung Institute Advisory Council's differing standards for rechecking blood pressure in adults with blood pressure readings between 140/90 and 160/95. For adults under 50, a recheck is advised within two to three months, while, for those over 50, a recheck is advised within six to nine months.[17]

Evidence from other societies, as well as from the U.S., shows that blood pressure does not always increase with age, although slightly elevated blood pressure in youth is associated with marked hypertension at older ages.[18]

It is estimated that approximately 20 percent of those 60 or older (16,200) are hypertensive in Montana. Similar estimates claim approximately 25,800 persons between 40 and 59 years to have high blood pressure, and perhaps another 10,000 under age 40. The estimated prevalence rate for the 18 to 24 year age group is approximately three percent.

Family History

There is higher risk of developing hypertension if parents and close relatives have histories of high blood pressure levels. It is not known to what extent this is due to environmental as opposed to genetic factors.[19]

Population Density

Americans have traditionally felt that rural people are healthier than their urban counterparts. But data obtained largely from the Department of Health and Human Services' National Center for Health Statistics do not support this assumption. High blood pressure is 25 percent more prevalent in non-metropolitan, non-farm areas and 37 percent more prevalent in non-metropolitan farm areas than in metropolitan areas.[20] In order to determine the need for new initiatives and policy alternatives for rural health care by the Montana Statewide Health Coordinating Council, it is essential to assess the prevalence of hypertension in rural areas of the state.

Inactivity

The issue of inactivity is controversial; at present there is inadequate proof of its relationship to hypertension. There is some evidence that a sedentary lifestyle is associated with hypertension and that exercise can aid in both weight control and in reducing hypertension.[21] Research showed the effectiveness of exercise in blood pressure (and serum cholesterol) involved strenuous exercise. It cannot be assumed that moderate exercise would have the same effect on blood pressure.

Race

The incidence of hypertension among Native Americans in Montana is significant (2,611 per 100,000 population in 1978).[22] An unsettled issue is the degree to which hypertension is due to genetic versus environmental factors in this population. Heart disease is especially high in the older Native American population group in Montana.[23]

Stress

There is substantial evidence relating stress to hypertension.[24] Stress in this context is identified as "any stimulus, physical or emotional, internal or environmental, that evokes a response by the cardiovascular system." Work environments should be designed to reduce stress to a minimum, and people should be taught ways in which they can individually manage stress.

At present, there is little direct information on the number of Montanans affected by hypertension and its consequences, or on the characteristics of the affected population. A purpose of the federally funded State Hypertension Control Program is to obtain a data base for mortality and morbidity of hypertensive-related diseases. The program is in the second year of a five-year plan and prevalence data is not yet available. In addition to reported numbers of hypertensives, the data system will include data on hospital discharges on a routine basis. The Professional Activities Study (PAS), under the Commission on Hospital and Professional Activities, currently collects information from nine hospitals in the state (including some 45 percent of all hospital admissions). When this system is in place, reliable Montana-specific prevalence of hypertensive-related diseases can be estimated.

Currently, prevalence of hypertension can be estimated by using prevalence figures for special population groups (sex, age) and deaths from causes related to uncontrolled hypertension. This section presents and analyzes these data.

Becuase Montana's population has not been broken down into ten-year age increments, national estimates of HBP prevalence by sex and age cannot be applied. Thus, it cannot be detected if or how Montana differs from national norms. And, as has been discussed, reliable Montana-specific data is not available.

MORTALITY

One indication of the consequences of uncontrolled hypertension is mortality rates from causes of death related to hypertension. These include, but are not limited to, hypertensive heart disease, ischemic heart disease, cerebrovascular disease (broadly referred to as "stroke"), and kidney disease.

Nationally, there have been dramatic changes in the death rates from these causes in the last two decades. Until the 1960's, ischemic heart disease mortality was rising, while the mortality from cerebrovascular and hypertensive disease was declining. In the 1970's mortality from most major causes of death, including ischemic heart disease, declined markedly.[25]

In Montana, cerebrovascular disease was relatively stable between 1960 and 1970, from about 92 per 100,000 to about 101 per 100,000.[26] The rate remained about the same until 1975, when it dropped to below 90 per 100,000.[27] The death rate from hypertensive heart disease has remained basically steady over the past twenty years. Table 1 shows the downward trend in hypertension-related mortality between 1970 and 1977.

Montana has been below the national death rate for hypertension-related deaths over the past twenty years, and markedly below during the past eight years. While the death rate per 100,000 declined nationally for heart disease by 8.2 percent between 1970 and 1977 (362.0 to 332.3), it declined by 12.7 percent in Montana (321.0 to 280.2). Nationally, the percent of total deaths from heart disease in 1977 was 37.8 percent, while it was 33.3 percent in Montana.

MORBIDITY

Direct evidence on the amount of hypertension-related morbidity is not available. Hospital discharges, based on primary diagnosis, would be indicators of the amount of care received for various conditions related to hypertension.

SUMMARY

Hypertension and hypertension-related diseases are an important public health concern in Montana. It has been shown that Montana

Table 1
NUMBER AND CRUDE RATE OF DEATHS RELATED TO HYPERTENSION PER 100,000 POPULATION, 1970-77
MONTANA

Underlying Cause of Death	1970	1971	1972	1973	1974	1975	1976	1977	% of Total Deaths 1977
Cerebrovascular Disease									
Total	703	796	743	711	670	660	637	576	9.0
Rate	101.2	112.1	103.3	98.6	91.2	88.2	84.6	75.7	
Hypertensive Disease									
Total	15	25	27	24	20	17	13	15	0.2
Rate	2.2	3.5	3.8	3.3	2.7	2.3	1.7	2.0	
Disease of Heart									
Total	2,229	2,339	2,294	2,300	2,202	2,178	2,168	2,132	33.3
Rate	321.0	329.4	319.1	319.0	299.6	291.2	287.9	280.2	
All Causes									
Total	6,597	6,860	6,896	6,870	6,552	6,539	6,733	6,397	- -
Rate	950.0	966.2	959.1	952.8	891.4	874.2	894.2	840.6	
TOTAL POPULATION (In thousands)	694.4	710.0	719.0	721.0	735.0	748.0	753.0	761.0	

SOURCE: Department of Health and Environmental Sciences, Bureau of Records and Statistics.

ranks well below the national average in mortality caused by heart disease; yet the state has not achieved the national health planning goal of reducing heart disease to 156 and stroke to 29 per 100,000 persons by 1985.

Studies show that the greatest possibilities for control of heart disease lie with preventive actions for reducing risks through controlling hypertension, changing lifestyles and promoting a healthful environment.

Resource allocation studies have shown that given a fixed amount of funds earmarked for hypertension control, concentrating funds on screening to detect hypertensives is not the most cost-effective approach. Funds spent on improving adherence to treatment are probably a better use of resources.[28] Although screening has been a popular and highly visible approach to managing hypertension, there are indications that continued emphasis on this step may not be advisable except for certain population groups, and that efforts should be focused on initiating and maintaining proper treatment. In particular, improved referral and patient tracking mechanisms and patient and professional education appear to be needed.

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HEALTH CARE EXPENDITURES

INTRODUCTION

At both the state and national levels, health planning efforts have focused increasingly on the problem of rising health care expenditures. Consumers are faced with higher taxes, higher insurance premiums and higher out-of-pocket medical payments. Industry passes on its health care-related costs to consumers through higher prices for the non-health-related goods and services they purchase. Medicaid is a growing expense to state government. The Medicare and Medicaid programs developed by the federal government to provide health services to the poor and elderly have grown out of control and become more expensive than anyone expected, mainly because of health care cost inflation.

These developments have forced consideration of imposing limits on the health care system to control costs and use resources efficiently. State governments are now able to exert a degree of control over their individual health systems through Certificate of Need and rate review programs and health planning and policy making.

Cost containment is a high priority nationally and in Montana. The "Guidelines Concerning the Development of Health Systems Plans and Annual Implementation Plans," issued by the Department of Health and Human Services, recognize that controlling costs may have negative effects on access and quality of care.

Yet, Congress' intention to use the planning system for cost control is clear in the National Health Priorities listed in the National Health Planning and Resource Development Act.[1] Among the findings supporting these priorities were determinations that:

1. The massive infusion of federal funds into the existing health care system has contributed to health care cost inflation, while failing to provide for the adequate supply or distribution of services.

2. The responses of the public and private sectors to the problem of cost containment have not resulted in a comprehensive national approach.

3. Health care cost inflation has been substantially greater than the overall inflation rate, and has been generally uncontrollable.

4. Presently there are no incentives for the use of less costly alternative levels and modes of care.

This component of the State Health Plan will describe both national and Montana-specific trends in health care costs and expenditures. More emphasis has been given to costs of inpatient services than to costs of other kinds of care; this reflects the substantial proportion of overall expenditures for inpatient care and a lack of data from many health care providers.

Ongoing efforts to define and collect cost figures for all components of the health care system are beginning to produce a more realistic picture of the overall economic gains and losses from specific cost-containment policies.

PROBLEM IDENTIFICATION

Population growth, price increases and increased per capita utilization have all contributed to the growth in health expenditures. Figure 1 provides a graphic display of expenditure increases by source. While the relative importance of these components has fluctuated, higher prices and increased utilization together have accounted for about 90 percent of the total increase.

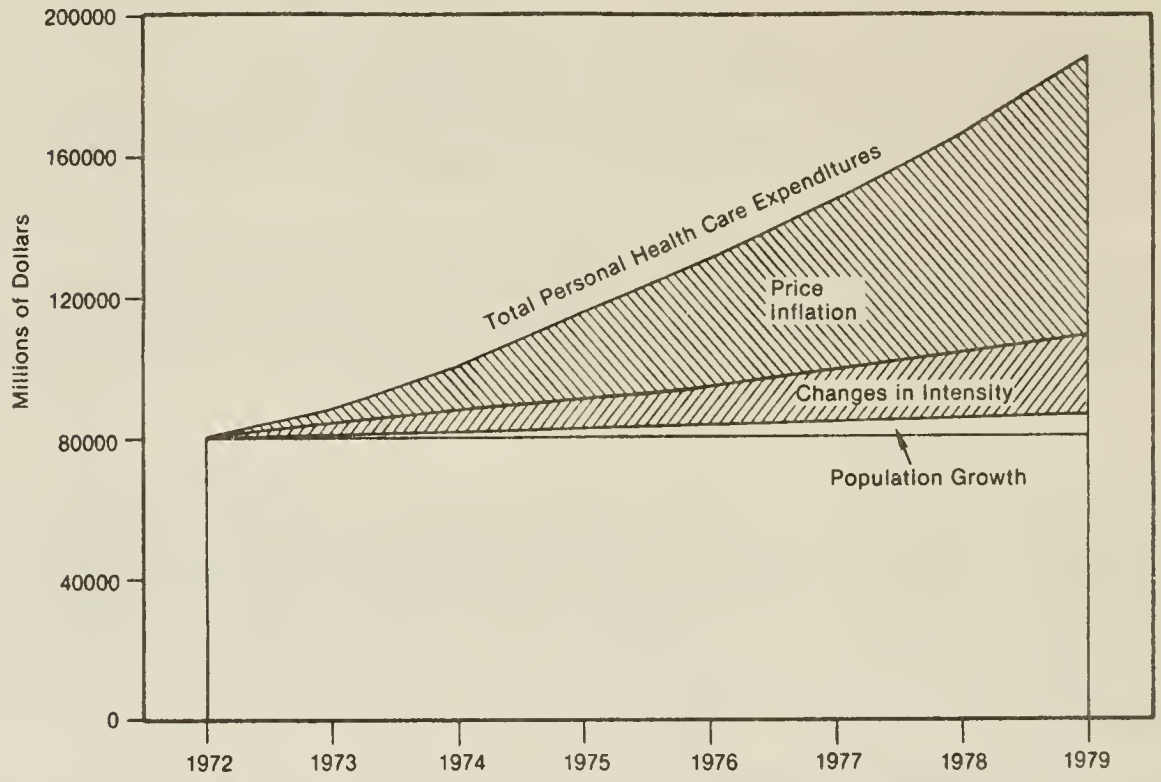
Marked increases in coverage by private and public health insurance have helped to stimulate the demand for health care, and the supply of resources, both manpower and facilities, has expanded rapidly in response to this increased financing. The expanded supply may have caused ever-greater demand for health care services, with the pattern of a chain reaction.

Recent concern has focused on the rapid expansion of government programs and the increasing proportion of GNP spent on health care. The attempt to make adequate health services available to everyone has not simultaneously discouraged overutilization of services or the inefficient use of resources.

As shown in Table 1, between fiscal years 1950 and 1978, annual per capita health expenditures in the United States multiplied more than tenfold from $82 to $943.[2] Personal health care expenditures included all spending for services to individuals.

The proportion of the GNP consumed by health expenditures doubled during this period, moving from 4.4 percent in 1950 to 9.4 percent in 1979. Total health expenditures increased more than 16 times, jumping from $12.7 billion to $212.2 billion. During the past few years, the growth of health care expenditures has been closer to the overall growth of the economy.

Figure 1
SOURCES OF GROWTH IN PERSONAL HEALTH CARE EXPENDITURES – 1972-79



SOURCE: "National Health Expenditures, 1979", Health Care Financing Review, Summer 1980.

Table 1
TRENDS IN NATIONAL HEALTH EXPENDITURES FOR SELECTED CALENDAR YEARS, 1950-79

Year	All Health Expenditures[1]	% of GNP	Private[1]	Public[1]	Federal % Of Public	Per Capita Expenditures[3]
1950	12.7	4.4	9.2	3.4	47.1	81.86
1960	26.9	5.3	20.3	6.6	45.5	146.30
1965	42.0	6.1	31.0	11.0	50.9	212.32
1970	74.9	7.6	47.1	27.8	63.3[2]	359.41
1975	132.1	8.6	75.8	56.3	65.9	607.58
1977	169.9	8.9	99.3	70.6	67.1	768.30
1979	212.2	9.0	120.8	91.4	66.6	942.94

[1]Billions of dollars.

[2]Federal Medicare and Medicaid programs started payments in 1966.

[3]Amount in dollars.

SOURCE: "National Health Expenditures, 1979;" Health Care Financing Review, Summer, 1980.

The problems in these growth patterns are ones that result from having limited resources. Resource allocations between the health care sector and other sectors may be necessary, as well as resource allocation within the health care industry. The government objective of reducing or eliminating the hardships of those segments of the population which are medically underserved is threatened by cost increases that do not expand services.

PROBLEM ANALYSIS

Type of Expenditure

Table 2 shows national health care expenditures by type of expenditure for selected years, 1950 through 1979. Hospital expenditures account for 40 percent of total health care expenditures. This is more than twice the amount spent on the next largest category, physicians' services. Hospital cost containment is thus a top priority of cost containment measures because of the large potential benefits from changes in utilization, efficiency or productivity in delivering hospital services.

Expenditures for physician services have generally grown at about the same rate as overall health care expenditures. The third largest category of expenditures, nursing home services, is the fastest growing section of the health care industry.

Our national population is becoming more elderly each year; the percentage of Americans in the "65 and over" category is growing steadily. This trend has meant continued growth in demand for long-term care services. It is expected that the portion of the chart in Figure 1 representing changes in intensity will continue the pattern of recent years.

Pressures from inflation, increasing per capita consumption of services, and the continuing growth of technology could force reductions in the relatively small portion of total expenditures going towards health promotion and protection. If health care resources are limited, it becomes necessary to develop a public policy for the most productive allocation of those resources.

Source of Funds

The growth of health care expenditures has occurred alongside changes in mechanisms for financing health care. Changes in the distribution of sources of funds between 1970 and 1979

Table 2
NATIONAL HEALTH EXPENDITURES BY TYPE OF EXPENDITURE, SELECTED YEARS 1950-79

Type Of Expenditure	Year						
	1979	1977	1975	1970	1965	1960	1950
	Amount in Billions of Dollars and Percentage Distribution						
Hospital Care	85.3 (40.2)	67.7 (39.9)	52.1 (39.5)	27.8 (37.1)	13.9 (33.1)	9.1 (33.8)	3.9 (30.4)
Physicians Services	40.6 (19.1)	31.9 (18.8)	24.9 (18.9)	14.3 (19.1)	8.5 (20.2)	5.7 (21.1)	2.7 (21.7)
Nursing Home Care	17.8 (8.4)	12.8 (7.5)	10.1 (7.6)	4.7 (6.3)	2.1 (4.9)	.5 (2.0)	.2 (1.5)
Drugs and Med. Sundries	17.0 (8.0)	14.0 (8.2)	11.8 (8.9)	8.2 (11.0)	5.2 (12.4)	3.7 (13.6)	1.7 (13.6)
Dentists Services	13.6 (6.4)	10.5 (6.2)	8.2 (6.2)	4.8 (6.3)	2.8 (6.7)	2.0 (7.4)	1.0 (7.6)
Prepayment and Administration	7.7 (3.6)	8.5 (5.0)	4.1 (3.1)	2.8 (3.7)	1.7 (4.1)	1.1 (4.1)	.5 (3.6)
Government Public Health	6.0 (2.9)	4.3 (2.5)	3.2 (2.4)	1.4 (1.9)	.8 (1.9)	.4 (1.5)	.4 (2.9)
Med. Facilities Construction	5.3 (2.5)	5.2 (3.1)	5.0 (3.8)	3.4 (4.6)	2.0 (4.8)	1.0 (3.9)	.8 (6.7)
Other Health Services	5.2 (2.4)	4.0 (2.4)	3.7 (2.8)	2.1 (2.7)	1.3 (3.1)	1.1 (4.1)	.5 (4.2)
Other Professional Services	4.7 (2.2)	3.6 (2.1)	2.6 (2.0)	1.6 (2.1)	1.0 (2.5)	.9 (3.2)	.4 (3.1)
Research	4.6 (2.2)	3.8 (2.2)	3.2 (2.5)	1.9 (2.5)	1.4 (3.4)	.6 (2.5)	.1 (.9)
Eyeglasses and Appliances	4.4 (2.1)	3.5 (2.1)	3.0 (2.3)	1.9 (2.6)	1.2 (2.9)	.8 (2.9)	.5 (3.9)

SOURCE: "National Health Expenditures, 1979;" Health Care Financing Review, Summer, 1980.

are shown in Table 3. The portion of health care costs paid "out-of-pocket" by consumers is decreasing. The private insurance share increased from 24.1 percent in 1970 to 26.7 percent in 1979; the federal share increased even more, going from 34.4 percent to 40.2 percent of total personal health care expenditures.

These changes mean that for nearly 70 percent of all personal health care expenditures, the consumer is insulated from direct experience of the cost of the services he receives. In many cases, the physician who orders health care services is also unaware of their actual costs. This is particularly true of hospital care, where 92 percent of all expenditures are paid by third-party payers (see Table 4).

Since limits will inevitably be placed on the formerly open-ended federal third-party programs, resource allocation will result. This allocation can either be achieved through the "natural" market process or through rational planning.

Reluctance to make difficult priority decisions could result in many persons losing access to essential health services. There is also considerable potential for the loss of prevention, health promotion, and health maintenance services in favor of the more pressing demands of acute care services. Government and private third-party systems control enough of all health care funds (70 percent) to maintain a rational balance of health services if a consistent and comprehensive health policy can be developed.

Montana Health Care Expenditures

Patterns of health care expenditures and financing in Montana are similar to the national patterns. Table 5 shows Montana health care expenditures by type of expenditure for 1979.

RECOMMENDATIONS

The following facts characterize the current health care cost situation:

1. Absolute and relative costs of medical care have increased at a rate out of proportion with other sectors of the economy;

2. Medical care costs may be using resources which could be used to meet other needs if they were not consuming an increasing share of the GNP;

3. Incentives to prevent over-utilization of expensive health care services have not been adequately provided by third-party payers;

Table 3

PERSONAL HEALTH CARE EXPENDITURES BY SELECTED SOURCES, 1970 and 1979

	1979	1970
	Amount in millions and percentage distribution	
TOTAL	188,551 (100.0)	65,372 (100.0)
Direct Payments	59,973 (31.8)	26,128 (40.0)
Third Party Payments	128,578 (68.2)	39,244 (60.0)
Private Health Insurance	50,286 (26.7)	15,744 (24.1)
Philanthropy and Industry	2,407 (1.3)	1,040 (1.6)
Government	75,884 (40.2)	22,460 (34.4)
Federal	53,311 (28.3)	14,561 (22.3)
Medicare	29,328 (15.6)	7,098 (10.9)
Medicaid	11,770 (6.2)	2,795 (4.3)
Other	12,213 (6.5)	4,669 (7.1)
State and Local	22,573 (12.0)	7,899 (12.1)
Medicaid	9,913 (5.3)	2,310 (3.5)
Other	12,660 (6.7)	5,589 (8.5)

SOURCE: "National Health Expenditures, 1979," Health Care Financing Review, Summer 1980.

Table 4

PERSONAL HEALTH CARE EXPENDITURES BY SELECTED SOURCES OF FUNDS, 1979

Source of Payment	Total	Hospital Care	Physicians Services	Dentists Services	Other Professional Services	Drugs & Medical Sundries	Eyeglasses & Appliances	Nursing Home Care	Other Health Services
	Percentage Distribution								
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Direct Payments	31.8	8.1	36.5	73.0	60.4	83.7	87.0	42.0	- -
Third-Party Payments	68.2	91.9	63.5	27.0	39.6	16.3	13.0	58.0	100.0
Private Health Insurance	26.7	34.9	37.3	23.0	12.9	7.9	3.6	.7	- -
Philanthropy and Industrial In-Plant	1.3	1.1	.1	- -	1.1	- -	- -	.6	24.8
Government	40.2	55.9	26.2	4.0	25.6	8.4	9.4	56.7	75.2
Federal	28.3	40.9	19.7	2.2	18.1	4.2	7.6	30.7	53.7
Medicare	15.6	25.4	15.8	- -	11.8	- -	5.7	2.1	1.9
Medicaid	6.2	5.1	3.0	1.8	5.3	3.9	- -	26.8	5.5
Other	6.5	10.4	1.0	.4	1.0	.2	1.9	1.8	46.3
State and Local	12.0	15.0	6.5	1.8	7.5	4.2	1.8	26.1	21.5
Medicaid	5.3	4.3	2.5	1.5	4.5	3.3	- -	22.6	4.6
Other	6.7	10.7	4.0	.3	3.0	.9	1.8	3.5	16.9

SOURCE: "National Health Expenditures, 1979," Health Care Financing Review, Summer, 1980

Table 5

HEALTH CARE EXPENDITURES BY TYPE OF EXPENDITURE 1980 – MONTANA

Hospital	Total Dollars	Percent	National Distribution
Private	196,813,309	33.3	
Federal	20,068,491	3.4	
State	11,930,939	2.0	
Total	228,812,739	38.7	40.2[1]
Long Term Care			
Private	59,490,108	10.1	
State	14,921,423	2.5	
Home Health	1,769,307	.3	
Total	76,180,838	12.9	8.4
Personnel			
Physicians	70,771,811	11.9	19.1
Dentists	34,303,920	5.8	6.4
Other	16,013,822	2.7	2.2
Total	121,089,553	20.5	27.7
Pharmaceutical	35,491,738	6.0	8.0
Gov. Public Hlth	68,552,776	11.6	2.9[2]
Eyeglasses	15,214,585	2.5	2.1
Prepayment Expen.	26,991,334	4.6	3.6
Research/Const.			4.7[3]
Other Health	18,109,604	3.1	2.4
FINAL TOTAL	590,443,167	100.0	100.0
State Per Capita	751.00	U.S. Per Capita	943.00

[1]National Hospital Expenditures include some long term care expenses.

[2]Government Public Health Expenditures for Montana and the United States are not comparable.

[3]Montana figures for research and construction are included in Government Public Health.

1980 Montana Population: 786,690

SOURCE: Department of Health and Environmental Sciences, Bureau of Health Planning and Resource Development, Montana Health Care Expenditures By Type of Expenditure - 1980.

4. While some people are covered by Medicaid, gaps in coverage leave many others unprotected;

5. Hospital-based care consumes 40 percent of total health care spending;

6. In 1978, public spending accounted for 39 percent of all medical care expenditures in Montana.

The Montana Statewide Health Coordinating Council recognizes the need to contain cost increases and maximize the cost-effectiveness of resources committed to health care. The following cost containment policies are derived from the Federal Health Planning Priorities, the Health Systems Plan and other sections of the State Health Plan. They should be followed in Montana health planning and implementation activities:

1. The most desirable cost containment method is to reduce the need for services. Effective health promotion programs should be encouraged by third-party payers, employers and state government.

2. Cost-effective alternatives to expensive institutional services should be encouraged by third-party payers, health care providers, and state government. This is particularly important where these alternative services give the consumer a more appropriate or acceptable service choice.

3. Cost reduction programs should be encouraged by third-party payers and state government. Voluntary programs such as rate regulation, second opinions for elective surgery or generic drug use should be encouraged when they can be shown to have definite benefits for Montana. These programs should be legislated only when their value is assured and they cannot be established by voluntary means.

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HEALTH SYSTEMS

HEALTH SYSTEMS - INTRODUCTION

The "Health Systems" section of this plan includes components on hospital inpatient services, hospital specialty services, long-term care, emergency medical services, and alcohol treatment services.

The three latter subjects were selected as priorities by the Statewide Health Coordinating Council in 1980. These choices are supported by the state's accident rate, the high incidence of alcohol problems, the growth of the 65-and-over segment of the population, and the increasing importance of chronic degenerative diseases.

The components on hospital services focus on priority issues for state health policy. Hospitals are, by any form of measurement, the major segment in our health care system. Nationally, hospital revenues represent about 40 percent of total health care expenditures. This plan's emphasis on hospital services reflects their importance to any effort to develop a comprehensive state health policy.

The "Health Systems" section builds on work done by the Montana Health Systems Agency in its Health Systems Plan and Annual Implementation Plan.

GENERAL HOSPITAL INPATIENT SERVICES

Introduction

General hospital inpatient services are those services provided to short-stay (less than 30 days) patients. These include diagnostic, therapeutic, and rehabilitative treatment services. The issues covered here are not comprehensive, but are considered to be the current priority issues in general hospital services in Montana.

Problem Indentification

Service Capacity

The Montana Health Systems Plan makes the assertion that there is an excess of general hospital beds in the state.[1] The primary reason for avoiding excess capacity is cost. Health care costs have increased to a level where it is essential that resources be used as effectively and efficiently as possible.

The 1981 Montana Health Systems Plan determined bed need for 1985 using a bed need formula adopted for Montana. Table 1 shows the estimated 1985 bed need for Montana by planning region. This is an update of previous estimates using 1980 data. The computational method is described in Appendix B.

An increased demand for services in 1980 and the reduction of 20 beds in Anaconda in 1981 have slightly lowered the estimate of excess beds in 1985. There are still more than 500 more beds than will be needed in 1985.

Service Accessibility

Montana has enough hospital capacity to serve the projected need, but because many areas are sparsely populated and far from population centers, there is still the possibility of some areas not having adequate access to needed services. There are hospitals in 49 of Montana's 56 counties. These hospitals provide services within 30 minutes of about 60 percent of Montana's residents.[2] It is doubtful whether there are any additional sites that could support a hospital.

The need for geographic accessibility to hospital services requires that care be provided in hospitals below optimum occupancy levels.

Table 1
HOSPITAL BED NEED – MONTANA

Region	Estimated 1985 Bed Need	1981 Beds	Estimated 1985 Surplus
Eastern	382	493	111
North Central	603	753	150
South Central	619	652	33
Southwestern	650	798	148
Northwestern	629	731	102
TOTAL	2,883	3,427	544

SOURCE: Montana Annual Survey of Hospitals, 1980, Montana SHPDA 1979 Patient Origin Study, See text for method of determination of bed need.

Cost of Care

Hospitals are the largest sector of the health industry in terms of:

--the volume, range, and mix of services they provide

--services covered by third-party payers

--number and types of paraprofessionals and professional manpower resources

--training sites and experiences

--the concentration of capital, facilities and equipment

--technical procedures

--health care expenditures

The growth of health care expenditures, particularly those for hospital services, has serious effects at three levels. First, these expenditures compete with other important claims on our public and private resources. Second, many individuals lack funds and are forced to go without the health care services they need. Finally, these combined pressures on government and private resources can force individual hospitals into a position where they are no longer financially viable.

The first two effects are discussed in the Health Expenditures section of this Plan, and the third is discussed here. The Montana Hospital Association has prepared 1980 Hospital Indicators, including a series of financial indicators.[3] The total revenue received by Montana hospitals was 104.83 percent of their total expenses. This margin is up slightly from 1979, when total revenue was 103.96 percent of expenses. Overall, Montana hospitals appear to have a slight margin at present income levels.

Montana's hospitals would not be able to meet expenses if they relied only on patient revenues. Total hospital revenues of $196,813,309 include $187,536,137 from patient revenues and $9,277,172 from other sources. Patient revenues thus cover only 99.9 percent of expenses. This percentage ranges from 102.5 for the largest hospitals to 86.5 for the under 30 bed hospitals.

The financial pressures on small hospitals are also reflected by their expenses per patient day. The state average for all hospitals per patient day is $235.21. Even though the small

hospitals (under 30 beds) have a narrower range of services and less personnel and equipment, nine of the 30 small hospitals experience cost over the state average. Expenses per patient day in these small hospitals range from $84.23 to $341.30. These costs are based on expenses for inpatient services only.[4]

The average cost per patient day in the small hospitals (under 30 beds) is $194.25. Their total expenses are 8.28 percent of Montana's total hospital service costs (see Table 2). The cost of maintaining these rural services thus does not appear to be a problem in terms of the overall health care cost picture in Montana. It is, however, a problem for the local communities forced to subsidize these hospitals which cover only 86.5 percent of their costs through patient revenues.

Summary

The following problems have been identified in the provision of General Hospital Inpatient Services in Montana:

1. There is an excess of hospital bed capacity based on the projected need for services.

2. Financial pressures threaten the viability of rural hospitals that are necessary to maintain adequate access to services.

Problem Analysis

Hospital Beds

The estimated number of excess beds in Montana is 522, as shown in Table 1. This number is based on licensed beds. If only staffed beds are considered, there are 114 less total beds, or 408 excess. A review of studies of bed-reduction methods suggests there is little financial advantage to such changes unless they close entire hospitals or discontinue services and shift patients to more efficient institutions.[5]

There are few opportunities for consolidation in Montana; most of them would involve consolidating services rather than merging institutions.

A more promising approach, as pointed out in the Montana Health Systems Plan, is to replace or modernize only those facilities which are needed. A process of state, regional, and institutional planning can be used to reduce excess

Table 2
HOSPITAL EXPENSES AND PATIENT DAYS – MONTANA 1980

Hospital Bed Size	Total Expenses	Percentage Of State Expenses	Total Patient Days	Percentage Of Patient Days Total
1 - 29	15,553,955	8.28	65,979	9.54
30 - 89	32,443,142	17.28	122,288	17.68
90 - 189	57,297,598	30.52	210,766	30.47
190 +	82,458,633	43.92	292,654	42.31
TOTAL	187,753,328	100.00	691,687	100.00

SOURCE: Hospital Indicators 1980, Montana Hospital Association, May 1981.

capacity when the time comes to improve or replace existing hospitals.

Soaring construction and financing costs have led to a situation in which adding any unneeded beds or services significantly increases patient charges throughout the hospital.

The Montana Data Book and Medical Facilities Inventory identifies those facilities with obsolete or licensure non-conforming physical plants. The total beds in each planning region needing replacement or renovation have been identified (see Table A, Appendix B). The number of excess beds in these institutions is an indicator of the current potential for bed reduction through cooperative planning before the formal Certificate of Need process begins.

Reduction of beds to the bed-need formula level would increase occupancy rates to the levels shown in Table B, Appendix B. These rates are below the level set by national guidelines, but are justifiable on the basis of adjustments permitted by those guidelines (see Appendix C for a detailed analysis of federal resource standards).

Small Rural Hospitals

Montana has 30 hospitals with fewer than 30 beds, and six more would fall into this category if beds were reduced to the needed number. The average number of beds in these hospitals is 17 and the average occupancy is 35 percent. There are about 180 people in these 30 hospitals each day on the average or 1,890 patients each day statewide.

The cost of operating these small hospitals is 8.28 percent of Montana's total hospital costs. Although small hospitals are generally inefficient, they are not major contributors to the total cost of hospital care. Since in most cases they are necessary to provide accessibility for rural patients, they should remain in operation. Their continued existence is affordable from a system-wide standpoint, and is probably the least expensive alternative for serving their rural areas. The problem at present is that some individual institutions are becoming less financially viable.

There are a number of programs underway to strengthen Montana's small primary care hospitals. The Montana Hospital Association has established a Group Purchasing Program to gain the benefits of volume purchasing and provide better access, product evaluation and purchasing expertise to small institutions.[6] City and county governments have given assistance to local hospitals. The hospitals have also redirected and diversified their services in some cases.

Among the variety of measures taken by hospitals and others to contain health care costs and use resources more efficiently, two in particular have been effective. These are the centralization of local resources and deregulation of medical facilities.

Centralization of services can occur at the local level in ways that foster competition without encouraging duplication. Local communities often cannot support long-term care beds, home health care services, a variety of public health and other services needed by the community. The pooling of resources by different agencies could make local hospitals more viable and simultaneously expand the range of services available locally.[7] Cost savings might be consumed by expanded demand for services, but the local community would still benefit.

Some of these innovations require changes in licensure laws and rules, and changes in reimbursement agreements. It may be necessary to expand services for which primary care hospitals are reimbursed, and there may need to be some changes in what is required of them to qualify for licensure. One alternative is to offer the option of a new licensure category for primary care hospitals. Hospitals that choose this option would restrict their delivery of more complicated services, and thus it could be possible to reduce their reporting requirements, facility requirements, and, possibly, their personnel and procedural standards.[8]

Tables C and D, Appendix B, show the number of hospitals with various specified services. As expected, there are a few services offered by almost all hospitals and others not commonly offered in the under 30 bed hospitals. The changes necessary would not be intended to restrict them, but to set requirements more appropriate for their actual role in the health care system and make possible the provision of more diversified health services.

Recommendations

Goal: Montana should have an adequate supply of hospital beds to meet state, regional and local needs, while avoiding excess capacity or unnecessary duplication of services.

> Objective 1: Through 1985, Montana hospitals should decrease the number of excess beds whenever hospitals in service areas with excess beds remodel or replace their facilities.
>
> Action 1: By 1985, all hospitals in Montana should have developed a long-range plan which includes a bed need

analysis for their service area. Long-range institutional plans should include construction, modernization, conversion, consolidation, merger, or other actions required to bring resource commitments into line with projected needs.

Objective 2: Through 1985, some form of Certificate of Need law should be continued in Montana as a basis for establishing and maintaining community consensus on hospital resource needs.

Action 1: Montana health care providers, the Department of Health and Environmental Sciences, and other interested and involved individuals, groups and agencies should continue to negotiate the type of Certificate of Need regulation and related planning process most functional for Montana.

Action 2: Through 1985, Certificates of Need should be approved only for the construction, modernization, conversion, or consolidation of beds required to meet projected needs.

Goal: Montana should maintain a strong primary care hospital service system, with geographic accessibility remaining at or above the 1980 level.

Objective 1: By 1985, Montana's rural primary care hospitals should increase their ratio of patient revenue to expenses so as to cover at least 90 percent of expenses.

Action 1: The Montana Hospital Association and the Departments of Health and Environmental Sciences and Social and Rehabilitation Services should work with local communities to encourage diversification of hospital services and the consolidation of local health resources.

Action 2: During 1981 and 1982, the Montana Departments of Health and Environmental Sciences and Social and Rehabilitation Services and the Montana Hospital Association should investigate the feasibility of creating a new licensure category for small, primary care hospitals. If this system can be shown to offer economic advantages and increased stability to rural hospitals, appropriate legislation should be recommended to the 1983 Legislature.

Objective 2 In 1983, the Montana Legislature should consider legislation to provide alternative funding mechanisms for local government support of community hospitals.

Action 1: The Montana Statewide Health Coordinating Council and the Montana Health Systems Agency, with assistance from health care providers and local government representatives, should examine alternatives for community hospital funding and recommend appropriate legislation in 1983.

REFERENCES

1. Montana Health Systems Agency, 1981 Montana Health Systems Plan, 1981, page 4-3.

2. See reference 1, Health Systems Plan, pp. 4-4, 4-5.

3. Montana Hospital Association, Hospital Indicators 1980, May, 1981.

4. Montana Hospital Association, unpublished data from 1980 survey of hospital expenditures.

5. William B. Scheartz, M.D., and Paul L. Joskow, Ph.D., "Duplicated Hospital Facilities," The New England Journal of Medicine, Volume 303, No. 25, December 18, 1980, pages 1449 through 1457.

6. Montana Hospital Association, Overview of MHA's Group Purchasing Program, May, 1981.

7. Western Center for Health Planning, "Rural Hospital Diversification Strategies," Technical Assistance Memo No. 71, January, 1981.

8. Western Center for Health Planning, "The Dilemma and Promise of the Rural Hospital," Technical Assistance Memo No. 70, January, 1981.

HOSPITAL SPECIALTY SERVICES

INTRODUCTION

Certain specialized hospital services are not offered in all hospitals. Some of these services have been addressed in the National Guidelines for Health Planning[1] and in the Montana Health Systems Plan.[2] The focus of most planning for these services has been accessibility and cost. In addressing these two issues, quality of care, availability, continuity and acceptability are considered, but not emphasized, unless there is evidence they are significant issues.

An analysis of Montana's status with respect to the national guidelines standards is in Appendix C.

PROBLEM IDENTIFICATION

Radiation Therapy

Radiation therapy is used in the treatment of cancer and the Montana Health Systems Plan has addressed this service in that context.[3] The plan presents the determination of need for radiation therapy equipment as a compromise among the factors of service accessibility, travel costs, availability of manpower, and the capital and operating costs of equipment.

Table 1 shows the location of existing high energy radiation equipment and recent levels of operation. A key factor in successfully establishing an adequate treatment capability without excessive investment or inadequate accessibility is the development of a coordinated system with various levels of care. The Health Systems Plan has addressed this issue and identified areas where additional capacity may be needed.[4]

Computerized Tomography Scanning Services

Computerized tomographic (CT) scanning combines X-ray equipment with computers to produce cross-sectional images of the head or body. Determination of the need for CT scanning services has been considered important because they are expensive to purchase, maintain and staff. Advances in both technology and use of CT scanners have resulted in difficulty in making these need determinations.

The 1980 Montana Health Systems Plan established utilization standards for scanners in Montana and estimated the total need for scanners in the state.[5] These standards were found "inadequate in defining need for a scanner" in a subsequent reconsideration decision.[6] Since that time, (March, 1980) decisions are

Table 1
RADIATION THERAPY UNITS AND PROCEDURES – MONTANA

Facility	Region	Cobalt 60 Unit	Megavoltage Unit	1978	1980
Columbus Hospital (Great Falls)	II	X	X	7,069	7,220
Northern Rockies Reg. Cancer Center (Billings)	III	X	X	7,765	7,850
Bozeman Deaconess (Bozeman)	IV	X		435	1,199
St. Peter's Hospital (Helena)	IV	X		1,211	729
St. James Community (Butte)	IV	X		1,218	1,872
St. Patrick Hospital (Missoula)	V	X		2,607	5,575

SOURCE: Department of Health and Environmental Sciences, Bureau of Health Planning and Resource Development, Montana Annual Survey of Hospitals, 1980 and private communication from Northern Rockies Regional Cancer Center.

made using a diagnosis-related methodology and institutional discharge data on a list of diseases for which CT scans are appropriate.

The number of scanners in Montana has grown from three in 1978 to eight that are either in place or approved in 1981. These scanners were approved with agreement to provide operational data for health planning. Scanners are located or scheduled for the following hospitals:

Planning Region I (Eastern) - None

Planning Region II (North Central)

Columbus Hospital, Great Falls - Full Body Scanner
Montana Deaconess Medical Center, Great Falls - Full Body Scanner

Planning Region III (South Central)

St. Vincent's Hospital, Billings - Full Body Scanner
Billings Deaconess Hospital, Billings - Full Body Scanner

Planning Region IV (Southwestern)

St. James Community Hospital, Butte - Full Body Scanner

Planning Region V (Northwestern)

Kalispell Regional Hospital, Kalispell - Full Body Scanner
St. Patrick Hospital, Missoula - Full Body Scanner
Missoula Community Hospital, Missoula - Head Scanner

Medical need within an institution is the basis for determination of need for CT scanners in Montana. It has been determined through the planning and review processes in Montana that the national guideline standards[7] are not appropriate for CT scanners.

Clinical Cardiovascular Laboratories and Cardiac Surgery Facilities

The Montana Health Systems Plan has determined that existing cardiac inpatient care services are adequate and should continue to be through 1985.[8] These services are available in Billings, Great Falls and Missoula. Table 2 shows the number of diagnostic procedures (Cardiac Catheterizations) and Table 3 shows open-heart surgeries for the hospitals involved in these services.

Standards have been set on the number of procedures required for economic operation of facilities and proficiency of personnel.[9] These standards are as follows:

Table 2

NUMBER OF CARDIAC CATHETERIZATION PROCEDURES IN MONTANA HOSPITALS 1977-80

Hospitals	Year Service Started	1977	1978	1979	1980
Billings Deaconess (Billings)	1972	505	486	364	394
St. Vincent (Billings)	1978		111	288	298
St. Patrick (Missoula)	1974	451	360	532	775
Montana Deaconess (Great Falls)	1975	101	201	343	325
TOTAL		1,057	1,158	1,527	1,792

SOURCE: Department of Health and Environmental Sciences, Bureau of Health Planning and Resource Development, Montana Annual Survey of Hospitals, 1980.

Table 3

NUMBER OF OPEN HEART PROCEDURES IN MONTANA HOSPITALS
1977 – 1980

Hospital	Year Service Started	1977	1978	1979	1980
Billings Deaconess (Billings)	1972	178	166	216	340
St. Patrick (Missoula)	1976	134	112	155	160
Montana Deaconess (Great Falls)	1981	-	-	-	-
TOTAL		312	278	371	500

SOURCE: Department of Health and Environmental Sciences, Bureau of Health Planning and Resource Development, Montana Annual Survey of Hospitals, 1980.

1. Each unit performing cardiac catheterizations should complete at least 300 procedures per year.

2. No new cardiac catheterization units in service areas where existing units are performing less than 500 procedures.

3. No new cardiac catheterization units in facilities not offering open-heart surgery services.

4. Each open-heart surgery service should perform a minimum of 200 open-heart procedures per year within three years after initiation of the service.

5. No additional open-heart units established unless each existing unit in the health service area is operating and is expected to continue to operate at a minimum of 350 open-heart surgery cases per year.

Existing facilities are sufficiently within standards to be considered appropriate. While no new services are anticipated to be needed through 1985, the standards permit expansion if the growth of demand for services is sufficient.

Obstetric Inpatient Facilities

Deliveries were reported in 56 of Montana's 61 community hospitals in 1980. About 70 percent of the 13,244 reported hospital births were in the ten hospitals that averaged one birth per day or more.

There are 30 hospitals that had less than 100 deliveries in 1980. Because of the travel distances to the larger hospitals, many small services either with or without a maternity unit are used. These services may operate at an even lower level due to referrals of higher risk deliveries. Even with the availability of these facilities, only about 60 percent of Montana's population is within 30 minutes of a hospital with obstetrical services. Table 4 shows regional estimates of the percentage of the population within 30 minutes of an acute care hospital.

The use of lower level maternity services is most effective when there is early identification of high risk deliveries and a consultation and referral system is available.

Neonatal Intensive Care

Neonatal services in Montana have been studies by the Health Systems Agency and are reported in the 1981 Health Systems Plan.

Table 4

ESTIMATE OF PERCENTAGE OF POPULATION WITHIN 30 MINUTES TRAVEL TIME TO ACUTE CARE HOSPITAL SERVICES – MONTANA

Region[1]	Percent of Population
Eastern	51.4
North Central	63.4
South Central	62.1
Southwestern	63.5
Northwestern	60.6

[1]Governor's Planning Regions.

SOURCE: Montana Department of Health and Environmental Sciences, Bureau of Health Planning and Resource Development, Montana Annual Survey of Hospitals, 1980.

The plan lists objectives directed to improvement of care.[10] These objectives are closely related to the issues in maternity services, where the development of maternal and infant referral systems and maintaining a strong secondary level of care system are most important.

Acute Psychiatric Inpatient Services

The Montana Health Systems Agency has found that a need exists for additional psychiatric care capacity in the state.[11] While beds may be available in general care units of hospitals, needs could be more effectively met if psychiatric units of ten beds or more were developed in some areas.

End-Stage Renal Disease Services

The Montana Health Systems Agency in cooperation with the End-State Renal Disease Network Coordinating Council #2* has developed a plan for these services in accordance with federal requirements. Table 5 gives the locations of renal dialysis units and sites where additional services are approved. The services identified in the Health Systems Plan and efforts to support home dialysis should be adequate to meet Montana's ESRD service needs.[12]

SUMMARY

1. Cancer treatment in Montana requires radiation therapy equipment to be located in hospitals where the utilization rates are below optimum levels.

2. Although a basis for CT service needs (diagnostic category admission rates) has been established, specific standards are needed.

3. Geographic distribution, weather conditions, costs, and patient preference result in the use of obstetric units with minimal capabilities, or hospitals without dedicated obstetric units for many deliveries in Montana. There are also no tertiary level services in Montana.

* Network covers the states of Alaska, Idaho, Montana, Oregon and Washington.

Table 5

CURRENT CAPACITY OF MONTANA RENAL DIALYSIS FACILITIES, JULY 1981

Facility	Approved Stations	Stations Pending	Possible Total
Northern Rockies (Billings)	12	- -	12
St. Peter's (Helena)	4	(1)	(5)
Columbus (Great Falls)	7	- -	7
St. Patrick (Missoula)	4	- -	4
TOTAL	27	(1)	(28)

SOURCE: End Stage Renal Disease Coordinating Council No. 2, Seattle, Washington, July, 1981.

PROBLEM ANALYSIS

Radiation Therapy

Since radiation therapy equipment needs are determined by a complex set of variables, data should continue to be collected and need assessments should be updated regularly. All equipment should be integrated into a comprehensive cancer treatment program either directly or through a referral system. These provisions are made in the Montana Health Systems Plan and the data system of the Montana Bureau of Health Planning and Resource Development.

Computerized Axial Tomography Scanning (CT)

The rapid expansion of CT equipment has resulted in decisions concerning addition of CT scanners being made on speculative rather than experience data. By 1982, there should be sufficient information from the Montana hospitals with CT scanners to develop useful criteria and standards to determine needs for this service.

Obstetric and Neonatal Care

The problems in obstetric and neonatal care are mainly problems of limited and dispersed population. The solution to these problems is generally considered to be use of consultation and referral services so higher risk deliveries can be handled in appropriate facilities and infants can be transferred efficiently when necessary.[13]

The first step in proper use of obstetric and neonatal services is maintaining the health of the mother and identifying risks early in the pregnancy. Table 6 reports on prenatal care in Montana. Educational programs and efforts to make services more available are resulting in an early beginning of prenatal care and less deliveries without it.

The Improved Pregnancy Outcome (IPO) Project of the Montana Bureau of Maternal and Child Health Services, Department of Health and Environmental Sciences, reports that Montana is progressing in regionalization of services.[14] They have identified a number of areas for further development and produced a draft "Montana Perinatal Regionalization Manual." This manual will be submitted to the Montana Medical Association for its adoption.

Table 6
PRENATAL CARE-SELECTED YEARS 1970-1979 – MONTANA

Years	Births	Trimester of Pregnancy in Which Prenatal Care Began I	II	III	No Care	Not Reported	Total
1970	12,622	72.1%	20.9%	4.7%	1.1%	1.2%	100.0%
1975	12,070	76.8%	17.6%	3.6%	.7%	1.3%	100.0%
1979	14,057	77.1%	18.7%	2.9%	.7%	.6%	100.0%

SOURCE: Montana Department of Health and Environmental Sciences, Bureau of Records and Statistics. Data from birth certificates.

RECOMMENDATIONS

Goal: To assure reasonable access by Montana residents to hospital specialty services while promoting the efficient use of health resources.

Objective 1: To continue through 1985 to meet needs for ratiation therapy services and maintain an integrated cancer treatment system.

Action 1: The Montana Health Systems Agency and the Bureau of Health Planning should review annually the estimates of radiation therapy services needs.

Action 2: Certificates of Need for expansion or addition of radiation therapy equipment should only be approved when service area need is established and there are assurances of adequate personnel to deliver the services.

Objective 2: CT scanner services should only be established in hospitals with adequate case loads of patients requiring CT services, and medical radiologic staff to use the service effectively.

Action 1: During 1982, the Montana Health Systems Agency and the Bureau of Health Planning and Resource Development should establish diagnosis incidence-based criteria and standards for CT equipment so there will be a common, easily understood basis for determination of service need.

Objective 3: Regionalization of obstetric and neonatal services in Montana should continue to be improved, and systems for encouraging and delivering prenatal care should be maintained.

Action 1: The Department of Health and Environmental Sciences should work with the Montana Medical Association and other care providers to promote use of the Montana Perinatal Regionalization Manual when it is adopted.

Action 2: Resources should be sought to provide consulting services where needed by institutions providing lower levels of perinatal care.

Objective 4: During calendar year 1982, resource standards for cardiac catheterization and open-heart surgery should be established for Montana.

Action 1: The Montana Department of Health and Environmental Sciences should work with providers of these cardiac services to assemble patient origin and referral data for these services.

Action 2: The Montana Health Systems Agency and Bureau of Health Planning should develop standards for cardiac service needs based on the information collected under Action 1 above.

REFERENCES

1. U.S. Department of Health, Education and Welfare, Public Health Services, Health Resources Act, National Guidelines for Health Planning, Publication No. 79-645, March, 1978.

2. Montana Health Systems Agency, Health Systems Plan, 1980.

3. See reference 2, Health Systems Plan.

4. See reference 2, Health Systems Plan.

5. See reference 2, Health Systems Plan.

6. A.C. Knight, M.D., Director, Montana Department of Health and Environmental Sciences, Findings of Fact, Conclusions of Law and Final Order in the Matter of the Application for a Certificate of Need for a Body Computed Tomography Unit by Billings Deaconess Hospital, Billings, Montana, March 14, 1980.

7. See reference 6, Findings of Fact, Conclusions of Law and Final Order.

8. See reference 2, Health Systems Plan.

9. See reference 2, Health Systems Plan, National Guidelines, 1980.

10. See reference 2, Health Systems Plan.

11. See reference 2, Health Systems Plan.

12. See reference 2, Health Systems Plan.

13. Marie C. McCormick, M.D., "The Regionalization of Perinatal Care," American Journal of Public Health, Volume 71, Number 6, June, 1981, p. 571.

14. Vernon L. Goller, "Draft Montana Perinatal Regionalization Manual (Protocol)," Improved Pregnancy Outcome Project, Bureau of Maternal and Child Health Services, Montana Department of Health and Environmental Sciences, 1981.

LONG-TERM CARE

INTRODUCTION

Long-term health care refers to any professional or personal service required on a recurring or continuous basis by an individual because of chronic or permanent physical and/or mental impairments.[1] This plan touches on all types of long-term care and all categories of long-term care patients, but emphasis is on care of the elderly.

Elderly persons (over 65 years) required an average of $2,026 per person for health care in 1978, while those under 19 averaged only $286. The 19 to 64 year age group required $764, which is a little more than one-third of the expenditures for the elderly. These expenditures are a major public policy concern, since nearly 64 percent of the expenditures for the elderly were covered by public funds, compared to 29 percent for the younger population.[2]

The number of persons in this high-need group is also growing. The number of persons 65 and over has risen from 4 million in 1900 to 24 million in 1979, and will reach an estimated 30 million by 1990. The proportion of the elderly over 75 years is growing even faster, with 38 percent of those over 65 in 1979 also over 75. By the year 2000, 45 percent of the elderly will be over 75 and 12 percent over 85.[3]

These increasing needs for care must be met in the current context of rising costs and a general reassessment of public responsibilities. Anticipated service demand would require expansions of nursing homes and other services in some areas. The present system is more than 60 percent funded through public programs. These programs, particularly Medicaid, will be the major determinant of service availability. Potential budget reductions have created a funding situation in which the Montana Department of Social and Rehabilitation Services has had to consider discontinuing Medicaid support for intermediate care and most support services in their fiscal 1982 budget. Fortunately, this crisis was avoided, but long-term care policy remains a major health planning concern in Montana as well as in most of the United States.

PROBLEM IDENTIFICATION

Service Availability

The Montana Health Systems Plan indicates that institutional long-term care services are adequate through 1985, with some

areas needing small increases in capacity.[4] Other long-term care services are less fully developed and not available in all parts of the state.

The full range of services includes the following:

--In-Home Services: Home health, homemaker, meals, visitors, legal services, counseling, hospice, education, and other services.

--Community-Based: Day care, senior centers, legal aid, information and referral, hospice care, foster care, sheltered workshops, and other services.

--Dedicated Housing Developments: Sheltered and congregate housing, retirement homes and other arrangements for those who need some assistance to manage their own residences.

--Personal Care Homes:* Homes for the elderly, mentally ill or developmentally disabled who require personal care, but not continuous nursing care.

--Institutional Facilities:* Skilled and intermediate care homes for the elderly and other requiring nursing care.

--Acute Care Facilities: Intensive care and treatment for short periods. This is not long-term care, but an essential service in the overall needs of many long-term care patients.

--Specialized Facilities: Facilities specifically for long-term care and treatment of mentally ill and developmentally disabled who require intensive care and treatment. Includes intermediate care for the developmentally disabled.

These categories of services include both medical, maintenance, and social assistance for the person needing long-term care. The largest single service component is the institutional facility or nursing home. Table 1 shows the current nursing home bed level and projected 1985 bed need for each planning region in Montana. Bed need is computed using the same formula as the Montana Health Systems Plan and updating to 1980 data. State-operated long-term care institutions are listed in Table 2.

*See Montana Codes Annotated, Section 50-5-101 for actual definitions of these services in Montana.

Table 1
NURSING HOME BEDS AND PROJECTED NEEDS – MONTANA

Service Area	Beds 1981	Bed Need 1985	Deficit (-) Surplus (+)
Eastern	990	955	35 +
North Central	1,108	1,127	19 -
South Central	1,059	1,162	103 -
Southwestern	1,469	1,501	32 -
Northwestern	1,302	1,351	49 -
STATE	5,980	6,096	168 -

SOURCE: Department of Health and Environmental Sciences, Bureau of Health Planning and Resource Development, Licensing List and Outstanding Certificates of Need.

Table 2
STATE OPERATED LONG TERM CARE SERVICES – MONTANA

Institution	Planning Regions	Beds
Eastmont Human Services	I	55
Warm Springs State Hospital	IV	64
Montana Center for the Aged	III	199
Montana Veterans Home	V	40
Boulder River School & Hospital	IV	242
Galen State Hospital	IV	185
TOTAL		785

SOURCE: Department of Health and Environmental Sciences, Bureau of Health Planning and Resource Development, Montana 1980 Medical Facilities Annual Report.

The Montana plans for Human Social Services,[5] Services for the Blind,[6] and Aging Services[7] give need estimates for a variety of long-term care services provided or financed through these agencies. Table 3 summarizes these need estimates and cost projections.

Specific plans for Mental Health Services and Mental Retardation Services are included in the 1981 Montana Health Systems Plan[8] and the 1981 Developmental Disabilities Plan.[9] These plans cover the special long-term care service needs for these populations. This plan covers the general non-specific services which are primarily utilized by the elderly.

Home health services have also been addressed in the 1981 Montana Health Systems Plan.[10]

Transportation costs, local acceptability of services, and availability of manpower all affect the feasibility of meeting estimated service needs in any given area. Plans for service development should take these factors into account. Regulations and reimbursement systems could be designed to facilitate offering home health services in conjunction with other local services; e.g., hospitals, nursing homes, public health departments.

Service Accessibility

Accessibility to services is a measure of whether or not an individual is able to obtain a needed service. The most common barriers to accessibility are geographical or financial barriers. If services are too far away, transportation is not available, or there is no way to pay for them, they are not accessible.

The Montana Health Systems Plan has found that distribution of nursing home services is generally adequate through 1985 with the possibility of expansion in some areas. The accessibility of other long-term care services is not as well documented, but some data is available.

A 1980 long-term care study in Montana found that three percent of Medicaid recipients in nursing homes score high enough on a Geriatric Functional Rating Scale to indicate independent living.[11] Eighty-two percent of the Medicaid recipients in nursing homes scored low enough that institutionalization was considered the most likely alternative. The remaining 15 percent scored somewhere between obvious institutionalization and independent living. Many of these would be candidates for lower level care services, if such services were available.

Table 3
ESTIMATES OF NEED FOR NON-INSTITUTIONAL LONG TERM CARE SERVICES

SOCIAL SERVICES

Service[1]	1983 Clients	1983 Budget
Case Management (DD)	1,641	$ 318,821
Adult Foster Care	1,200	208,210
Homemaker	2,400	741,749
Institutional Placement	1,800	305,809
Daily Living Training (DD)	562	2,791,185
TOTAL	7,603	$4,365,774

AGING SERVICES

Service	1983 Clients	1983 Budget
Region I		
Home Health	826	$ 83,643
Home Chore	826	15,071
Home Delivered Meals	300	163,655
SUBTOTAL	1,952	$262,369
Region II		
Home Chore	120	$15,109
Home Delivered Meals	1,500	72,297
Homemaker	100	12,524
SUBTOTAL	1,720	$99,930
Region III		
Homemaker	1,975	$ 46,391
Home Chore	1,975	17,761
Home Delivered Meals	4,000	46,687
SUBTOTAL	7,950	$110,839
Region IV		
Homemaker	3,500	$ 33,695
Home Health Aide	- -	71,258
Home Delivered Meals	1,000	199,218
SUBTOTAL	4,500	$304,171
Region V		
Homemaker Chore	639	$ 87,268
Home Health	296	39,763
Home Delivered Meals	664	108,624
SUBTOTAL	1,599	$235,655
TOTAL	17,921	$1,012,964
Service to the Blind - (FY 1980)		
Severly Disabled (Blind)	321	$255,000

[1]See Appendix A for service definitions.

[2]Regions presented are the Governor's Planning Regions. The Aging Services regions fit into these except the six Indian Reservations east of the Continental Divide which are considered a separate region by Aging Services.

SOURCE: Montana Department of Social and Rehabilitation Services, Montana Proposed Human Social Services Plan for Title XX, July 1, 1981 through June 30, 1983; Aging Services - Annual Plans for Area Agencies on Aging, 1980; Blind Services-Department of Social and Rehabilitation Services, Program and Financial Plan for Vocational Rehabilitation Agencies, 1979.

Although the data is insufficient to quantify the need, there is a clear need for more lower level care services, including a variety of support services. There is, however, probably not enough need to make these services feasible as independent programs in more sparsely-populated areas.

Level of Service

A general guideline for determination of the level of care is to place the long-term care client in the least restrictive environment. This means that persons should not receive more care than they need; i.e., not have things done for them that they could do themselves. It also means that their health, physical maintenance, and social needs should be provided if they cannot manage them.

There are two reasons for seeking the least restrictive care environment. First, it gives the client more freedom, independence, and personal responsibility. All of these things are believed to be conducive to both health and quality of life. The second benefit is one of cost of care. It is more costly to provide services that are not needed than to use a lower level of care when the patient needs only limited or intermittent services.

Another way to look at effects of alternatives to institutional care is to examine the projected bed needs. Since these needs have been computed from actual use data, they are direct indicators of rates of use. Table 4 shows the beds used per 1,000 persons over 65 years by planning region. It can be seen from this table that more beds are needed where there is less population living in or near large towns with a wider range of services.

This effect is most pronounced in Missoula County, where bed use was only 62.4 beds per 1,000 persons over 65 years. There are two contributing factors to the low use rate in Missoula. There is county subsidy of personal care home services for those eligible, and there are pre-placement screening services. The personal care homes are not licensed as personal care homes, and are thus regulated by the county only in conjunction with their supplemental payment program. The distribution of care needs might be different if the personal care homes were licensed and regulated as part of the health care system rather than as boarding homes.

Even if it is determined that the need for personal care homes is at a minimal care level, there should be fire, safety and

Table 4

NURSING HOME USE RATES BY PLANNING AREA – MONTANA

Planning Region	1980 Beds Used Per 1,000 Persons 65 Years or Over
Eastern	85.7
North Central	76.8
South Central	71.1
Southwestern	75.0
Northwestern	70.5
STATE	74.9

SOURCE: Department of Health and Environmental Sciences, Bureau of Health Planning and Resource Development, Montana Medical Facilities Annual Report, 1980.

care standards for homes for the elderly and other special groups. There should also be close monitoring of patients to determine when they need a higher level of care.

Existing evidence indicates that, in general, Montana has a system that is fairly effective in placing persons at the needed level of care. There is also evidence that the availability of more levels of care can reduce use of the more restrictive, more costly levels of care.

Cost of Care

Long-term care services other than nursing home services are frequently referred to as alternatives to institutional care. This description can be misleading because a person in need of nursing home care is unlikely to be able to individually piece together all of the needed services and would usually pay far more if this were done. Nursing home services, however, can be used as an alternative when a person only needs part of the care they offer but cannot obtain it elsewhere.

Simply creating more alternatives for care cannot be expected to make the delivery of long-term care more economical or efficient. There are several factors that can cause this approach to go wrong. One is the mixture of medical, social, and maintenance needs, and the way in which they are met. Responsibility for the determination of medical needs lies with a physician. Maintenance needs may be provided by the individual, family members, or government. Social needs may be the responsibility of the individual, his family, the community, or a nursing home. As a long-term care patient's care needs change, these responsibilities tend to shift and there is often no one with the specific responsibility of determining how they can best and most economically be met.

The successful use of the full range of services thus requires what has frequently been called a case management system. Actually, placement counseling or assistance might be a better term since many clients do not need management, but need assistance and advice in making their own decisions. Hospital discharge planners, social workers, and others provide services to many people, but there are no generally available placement counselors to help people identify the services and financing resources they need.

Another cost factor to be considered is the effect on nursing homes of an increased use of other levels of care. The result would be that the average nursing home patient would be more

disabled and require more care and possibly a higher level of care. This effect, coupled with the increasing proportion of elderly in our population, means the cost and quantity of needed nursing home care can be expected to increase even though there is increased availability of other levels of care.

The determination of future need for nursing home beds is a critical planning step in cost considerations. Table 5 gives current estimates of facility need for replacement or renovation if the beds continue to be needed. The construction of too many nursing home beds can be expected to result in unnecessary construction and financing costs. Postponing needed construction or building facilities that are too small for future needs is also inefficient and can lead to unnecessary expense.

Quality of Care

Quality of care in long-term care services is a continuing concern. Institutional care provides a total environment for the patient, and there are quality concerns with respect to safety, medical care, maintenance, and the social and emotional well-being of the patient. Nursing homes are subject to licensure and certification inspections, but the Department of Health and Environmental Sciences believes that current enforcement options are not always appropriate. The Department submitted proposed legislation in 1981 to make possible receivership procedures when violations justify closure, but closure is not considered in the best interest of the patients. This bill did not pass. There is probably need for a different provision to give adequate protection to both patients and care providers.

Personal care homes were formerly licensed under the Intermediate Care B licensure category, but there are now only 76 beds in the state with a personal care license. Most homes offering personal care services are licensed as boarding homes and have minimal requirements.

The Missoula County system for reimbursement for personal care services has found it necessary to establish a set of facility standards and operational rules for participating homes. While these homes are not in the strict sense medical facilities, they are involved in the continuum of care and should have some service definitions and standards.

Most of the other long-term care services are mainly manpower rather than facility services. These services are therefore defined and regulated by the individual professions and the various funding agencies.

Table 5
NURSING HOMES IN NEED OF RENOVATION OR REPLACEMENT – MONTANA

Region	1980 Licensed Beds	Renovate	Replace
Eastern	986	85 (9%)	12 (1%)
North Central	1,070	70 (7%)	109 (10%)
South Central	1,059	36 (3%)	50 (5%)
Southwestern	1,482	189 (13%)	60 (4%)
Northwestern	1,294	123 (10%)	- - - -
TOTAL	5,891	503 (9%)	231 (4%)
State and Federal Facilities	656	427 (65%)	- - - -

SOURCE: Montana Bureau of Health Planning and Resource Development, 1981 Data Book and Medical Facilities Inventory. Based on apparent condition of facility only. Renovation or replacement need would be subject to determination whether or not the beds were needed in their service area.

Summary

1. Determination of future need for nursing home beds is important for the management of both cost and availability. The existing capacity is close to the 1985 anticipated needs, but distribution and access must be considered as well as capacity.

2. There is need for additional lower level residential services.

3. Non-institutional long-term care services, including placement assistance, should be maintained and, in some cases, expanded.

4. Legal definitions of various levels of care need to be reassessed for the purposes of licensure, regulation, and reimbursement. This will affect the availability, cost, and quality of care and has the potential for improving all of these.

PROBLEM ANALYSIS

Nursing Home Bed Need

The combination of determining nursing home bed need through community planning and Certificate of Need regulation has resulted in the maintenance of an adequate supply of services and high utilization rates in most facilities. The gradual increase in availability of other long-term care services will probably not offset the additional service need due to increased elderly population. In 1980, 88.4 percent of nursing home use in Montana was by persons 65 years or older. Persons 75 years or older accounted for 73.3 percent of the use. When 1980 census data and new population projections are available, the bed need should be recomputed projecting need by specific age groups. The bed need formula should also be reevaluated to determine whether it is still the most appropriate method of projecting need.

Lower-Level Residential Care Home Bed Need

There is an indicated need for lower-level care homes in Montana. The specific number of beds cannot be determined until formal definitions, licensure laws, and reimbursement rules are established. Presently, Missoula County has about 50 persons in its program. If this were scaled to the entire state, based on the number of elderly persons, the state total would be about 740. Based on the Missoula experience, this would require about 1.2 million dollars in supplemental funds beyond Social Security Insurance and foster care payments. The average

monthly expenses per patient for nursing homes are reported at $936, compared to the $440 paid for county-subsidized personal care in boarding homes in Missoula. Development of appropriate standards and regulations for lower-level care would probably result in some change in the number of placements and an increase in personal care costs.

The total number of nursing home beds per 1,000 persons in Missoula County is 61.8, as shown in the bed distribution in Table 6. This is considerably below the state level of 73.5 (see Table 7). If personal care beds are included, the total for Missoula County is 78.2 beds per 1,000, which is still comparable because personal care beds in other areas are not counted and Missoula is a regional center for medical services.

Existing personal care homes, boarding homes that could be upgraded, and nursing homes that choose to convert would probably make up the needed number if suitable licensure and reimbursement were available. Space requirements per person will be necessary to maintain the desired freedom and more home-like atmosphere of the personal care concept.

Non-Institutional Long-Term Care

Changing lifestyles, increased life expectancy, and federal and state health financing programs have made the nursing home industry the fastest growing segment of the health care system. Placing a long-term care patient in a nursing home is a single action that should take care of all the individual's medical, social, and maintenance needs. The administration, nursing staff, and physician assume responsibility for the individual's needs. At the other extreme, an individual manages his own affairs, but contracts for certain services. Frequently, a service that is not available is assistance in various management functions; i.e., decision-making, contracting for services, and identifying sources of financial and other assistance.

The Montana Department of Social and Rehabilitation Services applied for, but did not receive, funds for a Federal Channeling Grant.[12] This Grant would have provided screening and placement assistance to persons needing long-term care services. There is also listed in the Montana Human Social Services Plan a budget item of $308,595 for Institutional Placement and Counseling.[13] This service is essential to effective utilization of the full range of community services. Both in terms of economic efficiency and quality of care, proper placement is essential. Neither nursing homes nor physicians can be expected to do the resource development or casework necessary to provide this service before placement.

Table 6
MISSOULA COUNTY LONG-TERM CARE FACILITIES – MONTANA

Level of Care	Number of Beds	Beds/1,000 Elderly
Skilled	261	47.7
Intermediate	57	10.4
Personal Care	20	3.7
Boarding Home	90	16.4
TOTAL	428	78.2

SOURCE: Montana Department of Health and Environmental Sciences, Bureau of Health Planning and Resource Development, Montana 1980 Medical Facilities Report.

Table 7

REGIONAL NURSING HOME BEDS* PER 1,000 PERSONS OVER 65 YEARS – MONTANA

Region	Beds/1,000
Eastern	88.9
North Central	74.3
South Central	64.8
Southwestern	73.4
Northwestern	71.6
STATE	73.5

*Excludes personal care beds.

SOURCE: Montana Department of Health and Environmental Sciences, Division of Hospital and Medical Facilities, Licensed Long-Term Care Facilities, February, 1981.

Montana Department of Community Affairs, Division of Research and Information Systems, Montana Population Projections, 1975-2000, 1977.

The need estimates in Table 2 are for services supported by federal and state funds. The actual service demands should be somewhat higher where these services are available. Most of these services, like nursing homes, would be less viable if public funding were not available. Nursing homes in Montana obtain only 29 percent of their income from direct patient payments, and 68 percent from Medicare and Medicaid. Home health care agencies receive 74 percent of their income from Medicare and Medicaid.

Medicaid, and to some extent Medicare, is in a position where its reimbursement rules determine not only the services available to its recipients, but also in many areas which services will be financially viable and thereby available to all long-term care patients.

Inflation and other medical care cost increases, together with anticipated cutbacks in government health programs, are a threat to the existence of many rural health services. One approach proven successful in many areas is centralization or cooperative consolidation of local health services. This approach makes possible facility and staff reductions and more effective use of professional manpower.

Hospitals, nursing homes, and public health departments are natural centers for the consolidation of services. In many cases, these institutions themselves can be combined. At the political level, it should be possible for counties to form multi-county health departments that could offer services a single community or county could not support. Communities' needs, resources, and preferences vary so a single model should not be imposed, but consolidation and manpower and facility sharing should be encouraged by technical assistance and operating policies of the various participants in long-term care delivery and financing.

Licensure and Regulation

The 1981 Montana Legislature, after considering a number of bills concerned with medical facilities licensure, decided that clarification and coordination was needed. Senate Joint Resolution 34 (see Appendix D) was passed and enrolled, calling on the agencies involved to review facilities' classifications and licensure and propose revisions or new laws to make them uniform and consistent.

If the review of licensure laws is closely coordinated with decisions on service funding, Certificate of Need standards

and criteria, and regulation and enforcement of standards, there is opportunity to form a consistent policy for future development of long-term care services in Montana.

RECOMMENDATIONS

Goal: A full range of long-term care services should be available and accessible to Montana citizens to the extent permitted by geographic and population distribution.

Objective 1: Through 1985, nursing home beds should be maintained near the levels determined by yearly updates of the HSA's five-year projections of bed need for each region.

Action 1: Certificate of Need programs should remain in effect as a method of negotiating and enforcing community consensus on nursing home and lower-level residential services bed need. This can be accomplished by health care consumers, state government, and long-term care providers cooperating in planning and supporting a Certificate of Need law that is appropriate for Montana.

Action 2: Certificates of Need should only be approved for remodeling, replacement, or addition of nursing home and lower-level residential services beds that:

a) are needed in their respective planning areas, and

b) can be expected to reach 90 percent occupancy within two years without causing homes in the same service area to drop below 90 percent occupancy, or

c) are necessary to provide accessibility for service area patients who otherwise would have to travel excessive distances.

Action 3: Bed need projection methods should be revised to use age-specific population projections by five- or ten-year increments, and the projection formula should be reevaluated.

Objective 2: By 1985, non-institutional long-term care services should be developed at least to the level determined by the 1980 SRS State Plans as quoted in this State Health Plan.[14]

Action 1: Long-term care consumers and providers and the Montana Departments of Social and Rehabilitation Services and Health and Environmental Sciences should join the Statewide Health Coordinating Council in encouraging the Legislature and other participants in financing the various levels of care. All needed levels of care should be funded. Expenditure limits should be set rather than totally removing needed services. However, if services must be removed, the selection should be made on the basis of providing the most essential services.

Action 2: The Montana Statewide Health Coordinating Council should, through 1981 and 1982, develop a comprehensive policy on long-term care service development and financing. The Council should continue a long-term care task force to assist in the implementation of the 1981 plan. The Council should then assist the above departments and the Legislature in establishing long-term care licensure laws and budgets.

Objective 3: The Statewide Health Coordinating Council, the Health Systems Agency, and the Department of Health and Environmental Sciences should encourage the development of long-term care information and counseling services for individuals and families. These services should be available to assist any individual or family, and not limited to Medicaid and Medicare recipients.

Action 1: The above organizations should identify potential service delivery agencies and actively seek support for this service.

Objective 4: By 1983, a system of encouragement and assistance for local development of non-institutional long-term care services, including placement counseling, should be established.

Action 1: The Montana Department of Social and Rehabilitation Services should continue to seek funding for its screening and placement counseling services.

Action 2: The Montana Department of Health and Environmental Sciences and the Department of Social and Rehabilitation Services should immediately form a joint task force to encourage local development of services through technical assistance and removal of regulatory and reimbursement barriers to formation of multi-service institutions (including swing bed arrangements) or agencies.

Objective 5: By 1983, Montana should establish a uniform and consistent Medical Facilities licensure law to facilitate the development of a full range of long-term care services, with emphasis on protection of safety and quality of care.

Action 1: The Montana Statewide Health Coordinating Council should volunteer to work with the Montana Departments of Social and Rehabilitation Services, Health and Environmental Sciences, and Institutions, long-term care consumers and providers to provide the Legislative Interim Committee, established by Senate Joint Resolution Number 34, with recommendations on service and facility definitions, licensure categories and enforcement rules and sanctions for long-term care services, even though this resolution was not funded for study.

Action 2: See Objective 2, Action 2.

Resource Requirements

The above recommendations require maintaining most services at existing levels, with some increase to accompany population increases.

Funding of systems for assisting persons in selecting and obtaining care are needed to effectively and efficiently use the range of long-term care services. The monitoring of placements in personal care or other limited care homes is essential to their use, and will require specific funding.

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EMERGENCY MEDICAL SERVICES

Introduction

Accidental injury has been the third leading cause of death in Montana for three consecutive years and ranks as the fourth leading cause of death nationally.[1,2] Although health professionals have long recognized accidental injury as a significant health concern, organized programs to provide pre-hospital emergency medical services have been only recently enthusiastically pursued.

To meet the needs of the critically ill and injured, the Emergency Medical Services System (EMSS) Act of 1973, (P.L. 93-154) was passed. The purpose of the EMSS program is to provide assistance and encouragement for the development of comprehensive emergency medical services systems throughout the country and thereby improve the quality of patient care and reduce morbidity and mortality.[3]

These emergency medical services systems can be described as systems which provide for the arrangement of qualified personnel, appropriate facilities and necessary equipment for the effective and efficient coordination and delivery of emergency medical services within a reasonable geographic area. It is obvious then that an emergency medical services (EMS) system has some basic principles which generally can be stated as:

--the reduction of death and disability from sudden illness or injury;

--the prompt and proper treatment at the scene, in the ambulance and at the medical facility;

--the continuity of treatment in a facility with appropriate treatment capabilities.

The minimal medical services offered to the emergency patient in the pre-hospital phase of an emergency must necessarily be of a basic life support nature. This basic life support (BLS) service consists of the pre-hospital areas of detection of the emergency, dispatch of emergency personnel and equipment, administration of proper emergency care at the scene, transport to a medical facility, ambulance/hospital communication on victim status, and the in-hospital areas of adequate care at the medical facility, and if necessary, transfer to a more specialized facility. Whether pre-hospital or in-hospital, the emergency medical services delivered to the patient must meet established professional standards of judgements of value and must effectively meet the health needs of the consumer-patient. These services must meet the

standards and needs regardless of who delivers them--first responders, EMTs, ER nurses or physicians, etc.--or the setting at which they are delivered--at the scene, in transit, or in an emergency room.

This Emergency Medical Services (EMS) component of the State Health Plan will focus on the pre-hospital phase of an EMS system. This should not be construed as a de-emphasis of prevention methodologies, especially since prevention-oriented programs are of supreme importance in accidents yielding trauma victims. (Alcohol-related traffic accidents exemplify this situation. Prevention of the alcohol-related motor vehicle accident through educational programs and strict enforcement procedures might reduce the incidence of such accidents, thus partially easing the burden on an EMS program.) Nor should this pre-hospital emphasis imply a disregard for in-hospital emergency medical services. The emphasis of the component on pre-hospital emergency medical services reflects the prioritized concerns of the EMS Advisory Task Force of the Statewide Health Coordinating Council.

The priorities of this component are centered about the saving of lives of suddenly ill and injured persons. With those persons as a focal point, this component will address the priorities principally desired to produce an effective EMS system. These priorities consist of (a) the coordination of all state level EMS resources and (b) the public education of the practical issues of EMS in Montana. The relationship of these baseline priorities to the functional elements of an EMS program will be discussed in this component.

PROBLEM IDENTIFICATION

An operable emergency medical services (EMS) system is comprised of several functional elements. These five functional elements are attained by combining the fifteen essential items identified under Public Law 93-154 for the planning and development of an EMS system. The functional elements of concern are trained manpower, transportation, medical facilities, communications and organization of an EMS system.

Trained Manpower

The personnel available to the user of emergency medical services will range from those first on the scene to the in-hospital physician. Basically, this trained manpower can be listed as the following groups:

1. Dispatchers--phone and radio control operators responsible for the locating and dispatching of EMS personnel to the scene of the emergency.

2. Quick Response Units (QRUs)--These EMS responders have training in emergency patient care but are not involved in the transport of an emergent patient.

3. Advanced First Aid and Emergency Care (AFA&EC)--This is the minimal level of training allowable by Montana law to enable EMS personnel to be involved in the transportation of the emergent patient in a licensed ambulance.

4. First Responders--This designation is given to those who, in the course of other duties, may typically be the first to arrive on the emergency scene. This level would include law enforcement personnel, firemen, search and rescue members and other public safety personnel. The training in emergency medical response received by First Responders is separate from Advanced First Aid or Emergency Medical Technician training.

5. Emergency Medical Technicians (EMT)--Certified by the Montana Board of Medical Examiners in Basic Life Support protocols; normally this EMT-Basic performs the following: (a) render emergency care, rescue and resuscitation services; (b) provide emergency transportation, and (c) perform cardiopulmonary resuscitation in the pulseless, non-breathing patient.[4]

6. Advanced EMT ("Paramedic")--Persons trained in Advanced Life Support (ALS) services may perform procedures in addition to the EMT-Basic acts including: (a) administer intravenous saline or glucose solutions; (b) gastric or tracheal suction by intubation; (c) parenteral injections of drugs, and (d) such other acts as the Board of Medical Examiners may allow.[5] This level is not now recognized in Montana due to limited resources available to implement the program.

7. Registered Nurses (RNs)--RNs involved in EMS should be trained in emergency nursing by continuing education programs such as the Montana Emergency Nurses Education Program or a basic critical care course. These education programs should be available to all nurses, including those at the rural community hospitals.

8. Physicians (MDs, DOs)--Physicians involved in EMS should receive the advanced level of training available through such courses as Advanced Trauma Life Support (ATLS) and Advanced Cardiac Life Support (ACLS).

Local responsibility for public education regarding first aid and the emergency medical system is necessary. As many members of the general public as possible must be made aware of what to do

in emergency situations. Since the users of an EMS system in Montana are sometimes quite far from the service, the system itself must increase the probability that whoever is first on the scene of an emergency will know how to contact the local EMS system and what emergency procedures to utilize.

Transportation

The possible modes of transferring the emergent patient include both ground and air vehicles. Ground transport is normally by ambulance and is controlled by existing licensing provisions. The concern focuses on air transportation of persons in need of constant medical attention. Presently in Montana there exists no law, hence, no set of enforceable regulations to govern the operation of air ambulance services. No quality assurance of emergent patient care can be given without adopted standards for air transport vehicles.

Facilities

The vertical categorization of medical facilities (hospitals) in Montana seems unproductive due to the limited options existing for referral. Established referral patterns based on the small number of secondary treatment facilities in Montana seems to preclude the necessity for vertical categorization.

Communications

The population dispersion and numerous phone companies operating in Montana cause difficulty in the attempt to establish a single EMS access phone number throughout the state. A single system is not financially feasible in all areas of Montana.

Public information on the local level is an element of an efficient EMS communication system. The users of emergency services must be informed of the proper manner through which they can get access into the EMS system, thereby expediently gaining the needed emergency service.

Also inherent in an effective EMS communication system is an inter-system communication among those at the scene, the emergency response personnel and the medical facility. Law enforcement personnel on both the state and local levels many times are the first officials to arrive at the emergency scene; however, not all law enforcement personnel have direct access to existing local EMS communication systems, thus preventing expeditious contact with all emergency responders.

Organization

An Emergency Mecical Services System depends upon participation by health care providers in local communities and participation by state government. The coordination of the EMS activities of these participants is an important component to an efficient system. The probable activities of both groups would include stabilization of resources for long-range funding, public education on citizen access to an EMS system, training of hospital personnel, and training of the general public in appropriate emergency procedures they can do themselves. These activities should be coordinated to avoid duplication and to use resources efficiently.

Montana has many small hospitals that do not possess the resources to be classed into one of the three levels of trauma services suggested by the American College of Surgeons.[6] Therefore, it would be useful for them to have assistance in assessing and developing their emergency medical services and the effectiveness of their resources.

PROBLEM ANALYSIS

Trained Manpower

The number of personnel involved in providing emergency medical services in Montana has shown an increase since 1976. Nationally registered Emergency Medical Technicians residing in Montana have grown from 153 persons in 1976 to 1,078 persons in 1981. Of the currently registered EMTs, 902 are certified by the Montana Board of Medical Examiners to perform the duties of a basic EMT. An increase in Advanced First Aid and Emergency Care (AFA&EC) personnel has also been recorded from 1976 to the present; however, exact numbers have not been formally compiled.[7] It should be noted in the analysis of the manpower situation that Montana law requires AFA&EC training for licensed ambulance personnel, not the more sophisticated training of an EMT.

Consideration should also be given to the concept of providing emergency nursing education to enhance the emergency medicine capabilities of RNs. Courses such as the Montana Emergency Nurses Education Program are designed to provide the necessary training.

The training of First Responders should include the same patient care knowledge as Emergency Medical Technicians, but not the same equipment skills. Generally, a First Responder must know what should and should not be done in providing emergency care.[8] The Department of Transportation has developed a guide for a course specific to First Responders.

There are at least seventeen (17) physicians who list emergency medicine as either their primary or secondary area of specialty.[9] These and other physicians interested in emergency medicine could serve as a resource of technical input to EMT trainers so that training programs could add a more advanced level. The limitation of providing an advanced level lies in availability of funds, not with the resource physicians in emergency medicine. The emergency physician plays a vital role in an emergency medical services system, regardless if the system is predominantly urban or rural. The need for training and support of these physicians is obvious and such measures are offered in the Advanced Trauma and Cardiac Life Support programs.

Another area of manpower training is dispatcher training. Dispatchers are important to the cohesive operation of an emergency medical services system even though EMS calls comprise a smaller percentage of calls received by dispatchers than the percentage of police service or fire service calls.[10] None the less, dispatcher training should be considered an integral part of an EMS system. Training should include a section on terminology used by the medically-trained responders within the EMS system.

Transportation

Both primary and secondary transport mechanisms serve a useful purpose in an emergency medical service system. Primary transport is accomplished from the scene of the emergency situation to the hospital emergency department. It involves the use of ambulances or other ground, air, or water emergency vehicles and provides basic life support or advanced life support services. Secondary transportation can also involve air or ground ambulances and refers to the hospital-to-hospital transportation of the patient after stabilization. (Establishing transfer protocols between referral and receiving facilities will enhance secondary transportation.)

The concern of this component regarding transportation involves the absence of standards for air ambulances. Ground ambulances are regulated by state authority (Ambulance Licensing, ARM 16.30.101 through 16.30.210). However, no regulatory statute has been promulgated for air ambulances. Such a regulation should be developed utilizing the Department of Transportation "Air Ambulance Guidelines" and the American College of Surgeons air ambulance operations literature as resource material. As an interim measure during the development of a regulation, the previously mentioned resource material could be adopted as a recommended standard.

With established air ambulance regulations, the medical personnel involved in an air transport incident would be knowledgeable as to the equipment to be found on the air ambulance and, consequently, would be prepared for a secure transfer of the emergent patient.

Additionally, air ambulance regulations would be helpful in resolving reimbursement issues with third-party payers. Licensed air ambulances are necessary to qualify under the reimbursement provisions of the Medicaid program.

Should air ambulance standards be adopted as a regulatory article, reciprocity of standards among states would be a consideration.

Facilities

Hospital facilities will be addressed in the hospital component of this plan.

Communications

The users of emergency medical services are often located far from the service; consequently, it is necessary that those who first arrive at the emergency scene be knowledgeable as to efficient access into the EMS communication system. Approaches to ensure this efficient access are as follows:

--The general public should be educated as to the proper telephone access method. Whether the system is a 911 number or seven-digit number for local central access, the public should be aware of the access number via nationally approvable roadsigns or various types of printed materials.

--Law enforcement and public safety personnel (Montana Highway Patrol, County Sheriff's Department, City Police, Fire Department) are often first arrivals on the scene. Since these individuals normally possess radio communication capability as part of their normal equipment, they could aid an effective EMS program. There should exist a planned level of cooperation between law enforcement and public safety personnel, and local central dispatch centers utilized by local officials and local EMS programs.

The communication system employed by an EMS program should have ambulance-to-hospital radio communication and a central access number for the citizenry to enter the system.

The question of employing a 911 number or a seven-digit central access number is not as important as the concept of providing the public central access to the emergency communication system. Experience with 911 systems providing access to police, fire and EMS has shown that approximately 85 percent of the incoming calls involve police services, ten percent fire services, and five percent emergency medical services.[11] Central access to an emergency communication system is of major importance. The 911 communications system has the advantage of providing a more easily remembered access code.

Organization

The coordination of EMS activities conducted by local health care providers and by state agencies as well as the identification of consultative capabilities to improve emergency medical services in smaller hospitals could most efficiently be accomplished through a State EMS Advisory Council.

RECOMMENDATIONS

Goal: The development of Montana's emergency medical services system so as to provide coordinated and functional basic life support services throughout the state by 1985.

Objective 1: By 1985, the education and training of pre-hospital emergency medical services manpower should be developed for each level of emergency medical services personnel.

Action 1: Guidelines should be established for a training level of emergency care for law enforcement officers, firemen, rescue squads and other public safety personnel.

Action 2: Guidelines should be developed for the establishment and operation of quick response units (QRUs).

Action 3: Regulations/standards should be developed for the certification of advanced levels of Emergency Medical Technicians (EMT-Paramedic and EMT-Intermediate). These regulations/standards should be promulgated through a joint effort of the Montana Board of Medical Examiners, the Emergency Medical Services Bureau of the Department of Health and Environmental Sciences, and those persons and agencies qualified to deliver emergency health services.

Objective 2: By 1983, standards for air transportation should be developed and adopted to encompass acceptable levels of air transport.

Action 1: Standards for air transportation should be assimilated through a joint effort of the Emergency Medical Services Bureau of the Department of Health and Environmental Sciences, directly involved service providers and professional organizations, and third-party payers.

Action 2: Air ambulance licensure requirements and regulatory provisions should be adopted based on the standards formed under Action 1 of this Objective.

Objective 3: By 1985, a coordinated state level communication system should be implemented with full technical assistance available to local units of an emergency medical services system.

Action 1: Coordination of all departments of state government involved in a communication system is necessary for an efficiently functional EMS system; therefore, participation of such agencies essentially is required. All state agencies should begin immediately to plan their efforts in communication coordination.

Action 2: State agencies involved in communication systems--Montana Highway Patrol, Department of Fish, Wildlife and Parks, Department of Highways, the State Communication Division, and the Emergency Medical Services Bureau of the Department of Health and Environmental Sciences--should encourage, offer technical assistance to, and cooperate with the implementation of localized central access and dispatch systems within reasonable geographic boundaries.

Action 3: Public information/education of the access method into the emergency medical services communication system should be disseminated.

Action 4: Medical emergency aspects of dispatcher training should be organized to produce technically competent personnel.

Objective 4: By 1983, a State Emergency Medical Services Advisory Council should be established. The following organizational characteristics and duties should be included in the specifications of the Council:

a. The members of this EMS Advisory Council should be appointed by the Governor. These appointees should:

    1. represent the various EMS professions,

    2. represent local government,

    3. represent the health care consumer,

    4. represent all geographical areas of Montana,

    5. represent Native Americans on and off reservations,

    6. represent Montana community hospitals.

b. The duties of the EMS Advisory Council should include:

1. an advisory position to the Governor and state agencies relative to emergency medical services (including the actions under Objective 1, 2, and 3 above),

2. making recommendations regarding government programs involving emergency medical services,

3. advising the state legislative assembly on budget items which involve emergency medical services.

c. The duties of the EMS Advisory Council should be structured to allow the Council to serve as a statewide focal point for discussion and advice concerning emergency medical services. The duties should not be interpreted to view the Advisory Council as another level of authority; rather it should be viewed as a coordinating body of Montana's emergency medical services activities.

Action 1: The Department of Health and Environmental Sciences and the Statewide Health Coordinaging Council should encourage the 1983 Montana Legislative Assembly to pass legislation authorizing the State Emergency Medical Services Advisory Council.

Objective 5: A comprehensive statewide emergency medical services plan should be adopted to assure continuity of services within all EMS regions.

Action 1: The Emergency Medical Services Bureau of the Department of Health and Environmental Sciences should be charged with developing the comprehensive statewide EMS plan, and the EMS Advisory Council should serve in an approval capacity for such a plan.

Goal: Public awareness of emergency medical procedures and services through public education should be realized by 1985.

Objective 1: By 1985, public education of the emergency medical services provided and the manner in which the service is to be contacted should be fully developed statewide.

Action 1: The general public, including the tourist population, should be given every available exposure to the specific telephone access number to gain response from an emergency medical services unit. (Examples of such exposure could be road signs and inclusion in tourist information and road maps.)

Objective 2: The numbers of the general public who are trained in first aid techniques should be increased.

Action 1: By 1985, the State EMS Advisory Council, state agencies and volunteer groups involved in public first aid training should have a statewide coordinated program to promote and deliver this training.

Action 2: Integration of first aid training into established educational curricula should be encouraged. (An illustration of this would be to incorporate a first aid training section into an existing health class in schools.)

Objective 3: Coordination of the educational resources of the various agencies which are related to emergency medical services should be developed.

Action 1: The coordination of educational resources of state agencies would be a function of the Statewide EMS Advisory Council. The Council would serve as the focal point of statewide public education regarding emergency medical services.

RESOURCE REQUIREMENTS

Funding sources for those recommendations requiring additional expense can be considered as follows:

1. The State Emergency Medical Services Advisory Council would be funded for fiscal year 1982 by monies budgeted by the EMS Bureau of the Department of Health and Environmental Sciences. These funds are federal EMS Act monies. After the first year, appropriations from the state general fund would be required.

2. Implementation of the comprehensive statewide EMS plan will require general fund support.

3. The development of air transportation standards would involve minimal costs. Should the standards be incorporated as regulatory provisions by the 1983 Legislative Assembly, state general funds would be required as necessary to support possible inspection and enforcement provisions.

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ALCOHOL TREATMENT SERVICES

PROBLEM IDENTIFICATION

Alcohol-related problems are among Montana's most serious health status concerns. Several factors indicate the incidence of alcohol abuse and alcoholism in the state will increase in the future and continue among all races, classes, and ages. Factors of concern in Montana are: 1) the incidence of death in motor vehicle accidents in which the driver had been drinking increased from 39 percent in 1970 to 53 percent in 1979; 2) the absolute per capita consumption of alcohol for the drinking age population increased from 2.79 gallons in 1970 to 3.37 gallons in 1979, a 20.7 percent increase;[1] 3) the estimated 101,032 alcohol abusers in 1980 represent a rate of 128.4 per 1,000 population, and 4) the incidence of alcohol abuse among the Native American population is at an epidemic level.[2]

PROBLEM ANALYSIS

A major effort has been made to develop a statewide community-based alcoholism service delivery system in Montana. This system has expanded from a few fragmented service programs in 1973 to a rather comprehensive system in 1980 which includes every county in the state. The purpose of this system is to treat alcohol-related problems and reduce the negative consequences of drinking.

Figure 1 shows the services provided in various settings that comprise Montana's basic alcoholism treatment system. Clients may enter the system at any level of care, depending on their individual needs. Services are provided on the local level and vary in comprehensiveness across the state. Table 1 shows bed utilization rates for the state's residential treatment programs in 1980.

Program Design

State law requires counties to submit annual plans to the Alcohol and Drug Abuse Division (ADAD) of the Department of Institutions to qualify for funding for the treatment, rehabilitation and prevention of alcoholism.[3] The county plans provide information on local needs and priorities and solutions to local service delivery problems.[4]

Multi-county cooperation in providing alcohol services could produce cost savings and make possible a continuum of services.

Figure 1
INVENTORY OF EXISTING ALCOHOLISM TREATMENT RESOURCES

Name	Beds -- 1980 Detoxification	Inpatient	Intermediate	Transitional Living	Total
Eastern					
Glasgow CDC		51			51
Holy Rosary Hospital		15			15
					66
North Central					
Hill-Top Recovery	2		15		17
Providence Alcohol. Cntr.	7		14		21
Fort Belknap Tribes	8		4		12
Medicine Pine Lodge	11		8		19
Park Place Care Unit		20			20
Montana Deaconess Hospital		18			18
					107
South Central					
Rimrock Guidance Foundation	8	12		6	26
					26
Southwestern					
Galen State Hospital		85			85
Silver Bow Gen. Care Unit		18			18
Boyd Andrew Service Center				12	12
Butte Indian				7	7
					122
Northwestern					
Flathead Reservation Area Comprehensive Alcoholism Program	8		19	7	34
					34

SOURCE: Montana Department of Institutions, Alcohol and Drug Abuse Division.

Table 1

ALCOHOL TREATMENT RESIDENTIAL PROGRAM UTILIZATION RATES – MONTANA 1980

Facility	Percent
Frances Mahon Deaconess Hospital Chemical Dependency Center	89
Holy Rosary Hospital	42
Galen State Hospital	90
Care Unit	84
Medicine Pine Lodge	70
Fort Belknap Tribal Alcohol Program	31
Hill-Top Recovery Center	103
Providence Alcohol Center	70
Rimrock Foundation	87
Flathead Reservation Area Comprehensive Alcohol Program	81
Boyd Andrew Service Center	80
Butte Indian	52

SOURCE: Montana Department of Institutions, Alcohol and Drug Abuse Division, unpublished data.

These cooperative arrangements could be used to provide services that meet local needs when counties lack the population to support a full range of services.

County plans require ADAD approval. The ADAD has specific criteria to perform budget, technical, and program reviews of local funding proposals.[5]

The Hospital and Medical Facilities Division is involved in the alcohol treatment system in the following areas: 1) approval of Certificate of Need applications for new services and facilities, and 2) licensure of residential treatment facilities.

Federal law requires the licensing bureau to apply the same fire and safety codes used for hospitals and nursing homes to transitional living and intermediate care facilities with more than 15 beds. This policy forces some alcohol treatment centers to seek hotel-motel licensure as a less costly alternative, because meeting the more stringent hospital codes can mean expensive renovations. But without a health care license, an alcohol program has trouble obtaining third-party reimbursement. This licensure dilemma is a crucial problem for some alcohol programs.

Program Funding

State alcohol treatment programs are funded through taxes on the beer, wine and liquor sold in Montana. Earmarked alcohol tax monies are distributed by the ADAD to counties based on a formula using the county's population and land area. Incorporated cities receive 30 percent of the liquor tax from their county treasurers to use for law enforcement, regulation and control of liquor sales, public health, and transportation. Counties retain 4.5 percent of the tax revenues for administration. Detailed liquor tax distribution information is shown in Figure 2.

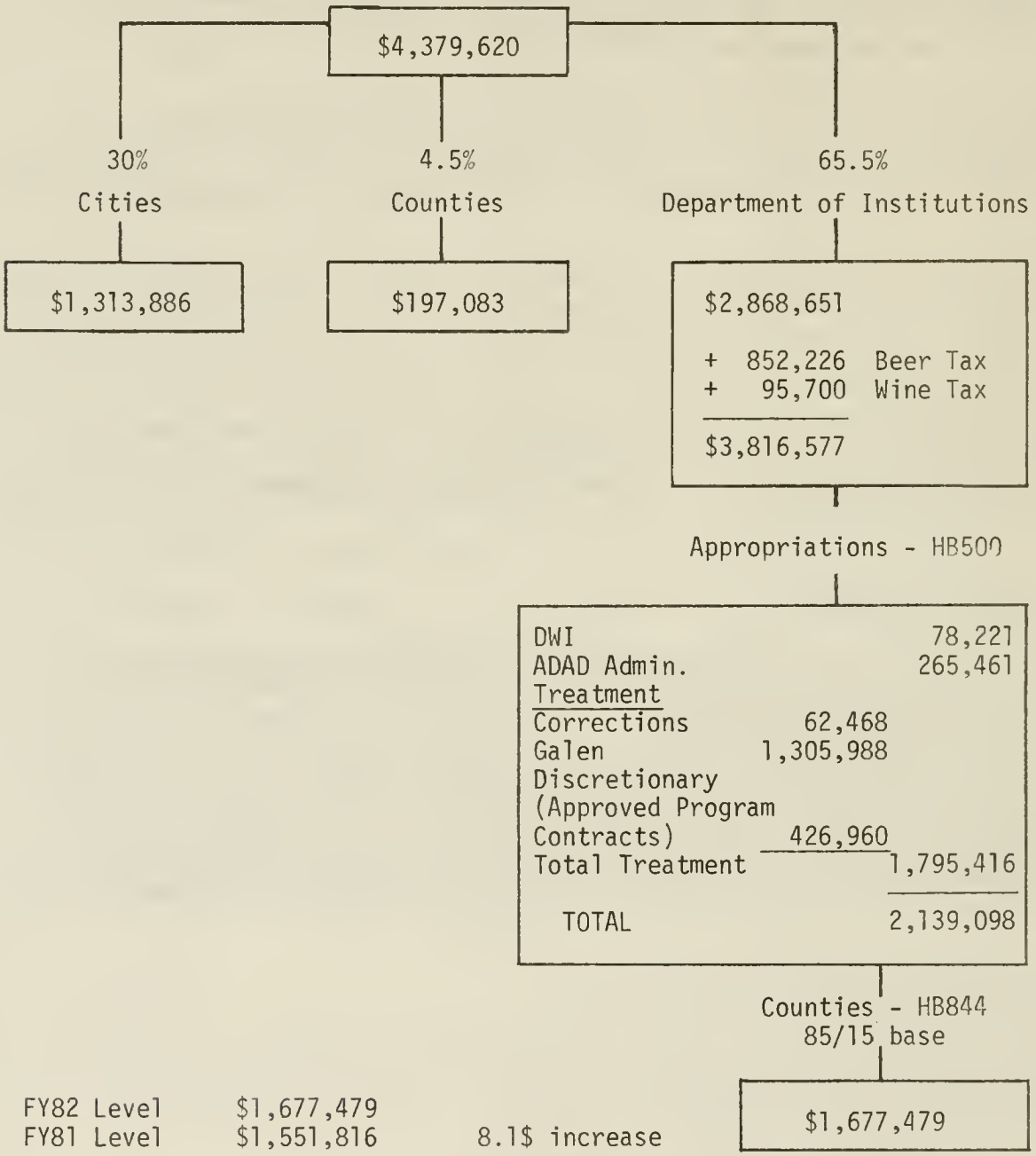
Availability and Accessibility

The following resources are available in Montana to reduce the impact of alcohol problems and their resultant suffering, social damage and economic costs:

--Diagnosis, treatment, rehabilitation, intervention, prevention services, and local community planning are provided at the county level, assisted by state funding from alcohol taxes allocated by the ADAD to county programs.

--Three sobriety maintenance organizations concerned with alcoholism:

Figure 2
LIQUOR TAX DISTRIBUTION EARMARKED ALCOHOL REVENUE – MONTANA FY82



SOURCE: Montana Department of Institutions, Rev. Estimate Update, 4-13-81.

1. Alcoholics Anonymous (AA), a fellowship of men and women who share their experiences, strengths, and hopes with each other in order to solve their common problem and help others recover from alcoholism.

2. Al-Anon Family Groups, a fellowship to meet the needs of those who live with alcoholics.

3. Al-Ateen, a fellowship that meets the needs of teenagers who live with alcoholics or have alcohol problems themselves.

Alcohol Education Programs

The ADAD has developed a Montana Teacher's Guide for Alcohol Education for use by local school districts. While the curriculum is not mandatory, a number of school districts, especially in the North Central planning region, have implemented it. There has been a continuing lack of teacher training and technical assistance; ADAD is trying to work out a solution to this problem in coordination with the Office of Public Instruction.[6]

Economic Impact

The National Institute on Alcohol Abuse and Alcoholism (NIAAA) estimated the cost of alcohol-related problems to be $42.75 billion in 1975. This total includes: lost production, $19.6 billion; social responses, $1.94 billion; health and medical costs, $12.7 billion; motor vehicle accidents, $5.14 billion; and fire losses, $0.4 billion.[7]

The Montana Council on Alcoholism has estimated that workers with drinking problems cost Montana business and industry $200 million a year in absenteeism, reduced productivity, mistakes, and accidents on the job.[8] The cost of alcohol services in fiscal 1980 was approximately $3.7 million in state, federal, and county funding. In addition, other federal funding totaling approximately $1 million is provided to reservations through the Indian Health Services.

Table 2 shows the amount of funds obligated to alcoholism by federal, state, and local governments.

General Policy

The ADAD has three broad purposes: 1) To review, evaluate, and coordinate all federal and state funding proposals related to

Table 2
ALCOHOLISM FUNDING INFORMATION BY FUNDING SECTOR/AMOUNT OF FUNDS OBLIGATED BY FUNDING SECTOR – 1979

State	Federal Amount (In $1,000) (R)	State Amount (In $1,000) (R)	Local Amount (In $1,000) (R)	Total Amount (In $1,000) (R)
No. of Rep. States	52	51	41	52
Avg. of Rep. States	5,279	4,843	1,649	11,329
TOTAL	274,490	247,014	67,604	589,110
Alabama	4,493 (23)	2,003 (29)	625 (25)	7,120 (29)
Alaska	1,757 (44)	1,910 (30)	1,217 (17)	4,884 (35)
Arizona	6,422 (13)	2,418 (25)	- - --	8,840 (23)
Arkansas	3,963 (27)	678 (42)	669 (23)	5,309 (33)
California	27,246 (1)	30,919 (1)	3,268 (8)	61,433 (1)
Colorado	6,675 (12)	6,060 (14)	1,996 (14)	14,731 (13)
Connecticut	2,756 (36)	9,047 (10)	435 (26)	12,238 (16)
Delaware	530 (52)	663 (43)	0 (37)	1,193 (52)
Florida	8,716 (7)	5,264 (17)	4,404 (6)	18,384 (9)
Georgia	4,563 (21)	5,445 (16)	421 (27)	10,429 (19)
Hawaii	4,033 (26)	- - --	- - --	4,033 (41)
Idaho	1,514 (46)	1,091 (38)	0 (37)	2,605 (46)
Illinois	7,476 (8)	15,973 (4)	4,943 (4)	28,392 (4)
Indiana	5,339 (19)	2,236 (27)	- - --	7,576 (27)
Iowa	3,861 (28)	2,697 (24)	1,851 (15)	8,410 (26)
Kansas	3,473 (32)	1,573 (32)	121 (33)	5,168 (34)
Kentucky	5,224 (20)	1,393 (34)	0 (37)	6,617 (32)
Louisiana	3,662 (29)	2,948 (21)	4,095 (7)	10,706 (17)
Maine	2,275 (41)	1,152 (35)	117 (34)	3,545 (43)
Maryland	4,260 (24)	3,493 (19)	726 (22)	8,479 (25)

Table 2
ALCOHOLISM FUNDING INFORMATION BY FUNDING SECTOR/AMOUNT OF FUNDS OBLIGATED BY FUNDING SECTOR – 1979

State	Federal Amount (In $1,000) (R)	State Amount (In $1,000) (R)	Local Amount (In $1,000) (R)	Total Amount (In $1,000) (R)
Massachusetts	11,115 (4)	11,908 (6)	- - --	23,023 (6)
Michigan	7,394 (9)	8,898 (11)	6,903 (1)	23,195 (5)
Minnesota	5,730 (17)	9,288 (9)	1,079 (19)	16,096 (12)
Mississippi	3,474 (31)	771 (41)	- - --	4,246 (39)
Missouri	5,421 (18)	4,470 (18)	634 (24)	10,525 (18)
Montana	1,365 (48)	2,218 (28)	1,200 (18)	4,783 (36)
Nebraska	3,228 (34)	3,240 (20)	234 (30)	6,702 (31)
Nevada	1,342 (49)	256 (49)	45 (35)	1,643 (51)
New Hampshire	1,406 (47)	273 (48)	- - --	1,679 (50)
New Jersey	6,009 (15)	433 (46)	2,576 (11)	9,018 (22)
New Mexico	2,371 (39)	1,440 (33)	7 (36)	3,817 (42)
New York	24,566 (2)	19,541 (2)	5,952 (2)	50,059 (2)
North Carolina	5,931 (16)	9,423 (8)	2,082 (13)	17,436 (11)
North Dakota	1,248 (50)	1,137 (36)	216 (32)	2,602 (47)
Ohio	7,110 (10)	2,400 (26)	5,100 (3)	14,610 (14)
Oklahoma	4,145 (25)	0 (51)	- - --	4,145 (40)
Oregon	2,349 (40)	6,194 (13)	4,661 (5)	13,204 (15)
Pennsylvania	10,160 (5)	10,520 (7)	765 (21)	21,446 (8)
Rhode Island	1,235 (51)	577 (44)	- - --	1,812 (49)
South Carolina	2,512 (38)	2,820 (23)	1,500 (16)	6,832 (30)

Table 2
ALCOHOLISM FUNDING INFORMATION BY FUNDING SECTOR/AMOUNT OF FUNDS OBLIGATED BY FUNDING SECTOR – 1979

State	Federal Amount (In $1,000) (R)	State Amount (In $1,000) (R)	Local Amount (In $1,000) (R)	Total Amount (In $1,000) (R)
South Dakota	3,565 (30)	495 (45)	412 (28)	4,472 (38)
Tennessee	9,297 (6)	226 (50)	- - --	9,523 (21)
Texas	13,012 (3)	15,660 (5)	226 (31)	28,898 (3)
Utah	3,428 (33)	1,052 (39)	- - --	4,480 (37)
Vermont	1,558 (45)	1,001 (40)	0 (37)	2,559 (48)
Virginia	6,375 (14)	2,905 (22)	305 (29)	5,584 (20)
Washington	8,862 (11)	7,667 (12)	3,096 (9)	17,824 (10)
West Virginia	1,781 (43)	291 (47)	821 (20)	2,893 (45)
Wisconsin	4,505 (22)	16,017 (3)	2,311 (12)	22,833 (7)
Wyoming	2,064 (42)	1,132 (37)	- - --	3,197 (44)
Washington D.D.	2,731 (37)	5,967 (15)	0 (37)	8,698 (24)
Puerto Rico	2,963 (35)	1,631 (31)	2,591 (10)	7,184 (28)
Virgin Islands	63	40	0	103
Guam	20	--	--	20
American Samoa	10	--	--	10
T. T. Pacific Islands	40	0	0	40
N. Mariana Islands	--	--	--	0

SOURCE: Department of Health, Education and Welfare, National Institute on Alcohol Abuse and Alcoholism, National Status Report Update, September, 1979.

alcohol and drug abuse; 2) To develop and review annually a statewide plan for alcohol and drug abuse, with the programs reviewed in terms of approved county plans and the state plan; 3) To encourage the development of coordinated community, multi-county, and statewide programs with the broadest possible citizen involvement.

The ADAD is committed to the following concepts: 1) comprehensive community alcohol treatment programs; 2) social treatment modalities; and 3) an increase in the promotion of prevention strategies. Its commitment is based on the philosophy that these concepts have the greatest potential to improve the overall health status of those with alcohol problems.

The overall alcohol treatment system is best described in the ADAD annual statewide plan.[9]

RECOMMENDATIONS

Goal: To stop the increase in alcohol abuse and alcoholism and increase the recovery rate through more effective treatment and rehabilitation services.

Objective 1: By 1983, establish alcohol prevention programs directed toward high risk and underserved groups (e.g., youth, Native Americans, elderly).

Action 1: Encourage local schools to implement the Montana Teacher's Guide for Alcohol Education in grades K-12, and the Superintendent of Public Instruction should be encouraged to support curriculum use by offering teacher training.

Action 2: The Montana Legislature and Montana Department of Institutions, Alcohol and Drug Abuse Division, should fund prevention programs that are strongly supported by local communities and that have a formally-structured evaluation component.

Objective 2: By 1985, the Montana Legislature should increase funding for alcohol treatment programs to provide needed increases in existing programs so they can be expanded to meet identified gaps in the service delivery system. (The Department of Institutions should continue accountability of their approved programs in accordance with the program's success, and continue to monitor research nationwide for relevance in Montana.)

Action 1: Expansion of services should include transitional living facilities in Montana communities with adequate support resources. Transitional living components should be developed as part of existing state-approved alcoholism programs in accord with approved county plans.

Action 2: To encourage development of residential treatment programs which respond to the special treatment needs of youth.

Action 3: Public funding of alcohol treatment should provide a balance among levels of treatment. By 1985, Medicaid reimbursement for alcoholism treatment should provide a full range of coverage, including inpatient care, intermediate care, transitional care, and outpatient care.

Resource Requirements

Prevention:

The reconciliation conference agreement on federal health block grants requires at least twenty percent of total funds for alcohol and drug abuse to be used for prevention activities. This amount should be adequate through 1985 when evaluation information can be used to determine whether additional state funds would be useful.

Treatment:

Additional state funds will be needed to increase treatment. These increases would be distributed between Medicaid and Department of Institutions funds. A like proportion increase should also occur in private pay treatment.

REFERENCES

1. U.S. Department of Health and Human Services, Public Health Service, Fourth Special Report to the U.S. Congress on Alcohol and Health, 1981

2. Montana Department of Institutions, Alcohol and Drug Abuse Division, Montana State Plan for Alcohol and Drug Abuse Prevention, Treatment and Rehabilitation, 1981.

3. ADAD Plan.

4. ADAD Plan.

5. Montana Department of Institutions, Alcohol and Drug Abuse Division, Review Criteria FY 1981, unpublished.

6. ADAD Plan.

7. Berry, et al., Final Report to the National Institute on Alcohol Abuse and Alcoholism, 1977, Contract No. (ADM) 281-76-0016.

8. ADAD Plan.

9. ADAD Plan.

INVENTORY OF STATE HEALTH PROGRAMS

INVENTORY

INTRODUCTION

This inventory of state-budgeted health programs includes programs run directly by the state and programs contracted out to other agencies using either state or federal funds.

For each program or agency there is a brief functional summary as well as budget figures for fiscal year 1982.

DEPARTMENT OF LABOR AND INDUSTRY

Division of Workers' Compensation

Safety and Health Bureau

Performs safety inspections of coal, mining and logging employers. Inspects boiler operations.

State	$713,587
Other	42,125
TOTAL	$755,712

DEPARTMENT OF INSTITUTIONS

Alcohol and Drug Abuse Division

Focuses resources on the problems of alcohol and drug dependence and the prevention, treatment and control of these problems.

Programs	State	Other	Total
Administration	$ 69,202	$ - -	$ 69,202
Advisory Council	3,000	- -	3,000
Division Operations	9,678	31,357	41,035
Community Grants	506,817	171,821	678,638
Contract, Monitor & Program Evaluation	- -	48,556	48,556
Planning Policy	- -	30,780	30,780
Evaluating & Reporting Bureau	- -	46,688	46,688
Management Information Systems	- -	44,842	44,842

DEPARTMENT OF INSTITUTIONS

Alcohol and Drug Abuse Division - Continued

Programs	State	Other	Total
Prison Programs	$ 58,189	$ 7,828	$ 66,017
Prevention & Education	- -	61,009	61,009
Training & Certification	- -	106,866	106,866
Supplemental Security Income Programs	- -	24,633	24,633
Montana Drug Program	185,419	385,350	570,769
Technical Assistance	- -	26,578	26,578
Community & Program Development Bureau	- -	49,942	49,942
	$832,305	$1,036,250	$1,868,555

OFFICE OF PUBLIC INSTRUCTION

Consultative Services Division

Health and Physical Education Program

Assists local school districts with health and physical education curriculums.

State	$7,000
Other	- -
TOTAL	$7,000

DEPARTMENT OF SOCIAL AND REHABILITATION SERVICES

Community Services Division

Administers direct services programs for the aged and for children and youths in health-related areas.

State	$ 2,908,734
Other	12,518,819
TOTAL	$15,427,553

DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

Director's Office

Administers the overall Department and its personnel, public information and planning and evaluation functions.

State	$107,000
Other	284,970
TOTAL	$421,970

Centralized Services Division

Supervises the personnel, fiscal management and vital records and statistics functions of the Department.

State	$313,561
Other	344,000
TOTAL	$657,561

Environmental Sciences Division

Concerned with health maintenance, productivity and well-being related to conditions of the environment.

State	$ 85,933
Other	46,658
TOTAL	$132,591

Air Quality Bureau

Maintains levels of air quality sufficient to protect human health and safety and prevent injury to plant and animal life and property.

State	$ 286,973
Other	760,815
TOTAL	$1,047,788

Food and Consumer Safety Bureau

Protects public health through programs covering food, public housing and product safety.

State	$419,815
Other	30,051
TOTAL	$449,866

Occupational Health Bureau

Maintains conditions in workplaces to protect human health and safety.

State	$143,779
Other	137,519
TOTAL	$281,298

Solid Waste Management Bureau

Controls solid waste systems through planning and licensing activities, and provides for proper disposal of hazardous wastes.

State	$ 37,282
Other	927,776
TOTAL	$964,998

Subdivision Bureau

Reviews the sanitary and environmental aspects of proposed subdivisions.

State	$ - -
Other	236,147
TOTAL	$236,147

Water Quality Bureau

Protects the quality of Montana's streams, rivers and lakes, as well as public water supplies.

State	$ 251,458
Other	1,311,769
TOTAL	$1,563,227

Health Services Division

Improves public health through the provision of preventive, therapeutic, and consultative services to individuals and communities.

State	$106,593
Other	139,977
TOTAL	$246,570

Dental Health Bureau

Provides dental health services to children in elementary schools.

State	$ 42,624
Other	250,400
TOTAL	$293,024

Preventive Health Services Bureau

Responsible for immunization activities and control of communicable and chronic diseases through prevention, surveillance and follow-up.

State	$143,510
Other	405,893
TOTAL	$549,403

Maternal and Child Health Services Bureau

Provides health services to women of child bearing age, infants, and children through contracts with local health providers and health departments. Programs include community nursing, handicapped children services, family planning, nutrition, and improved pregnancy outcome.

	State	Federal
Handicapped Children Service	$224,885	$ 670,479
Maternal and Child Health Projects	37,730	668,323
Family Planning Program	22,950	1,159,245
Nutrition Programs	4,687	6,950,701
Improved Pregnancy Outcome Project	-0-	384,128
Community Nursing Program	41,962	49,464
TOTAL	$332,214	$9,882,340
		$10,214,554

Legal Division

Represents the Department in administering state statutes and administrative rules.

State	$ - -
Other	225,000
TOTAL	$225,000

Laboratory Division

Provides laboratory and consultation services to programs of the Department.

State	$340,000
Other	272,000
TOTAL	$612,000

Hospital and Medical Facilities Division

Health Planning and Resource Development Bureau

Conducts health planning activities and administers the Certificate of Need Law.

State	$137,460
Other	406,813
TOTAL	$544,273

Emergency Medical Services Bureau

Monitors the design and operation of emergency medical services systems and the training of emergency medical technicians.

State	$310,000
Other	680,000
TOTAL	$990,000

Licensing and Certification Bureau

Issues licenses and grants certification to facilities and services which meet applicable regulations.

State	$123,420
Other	370,624
TOTAL	$493,044

STATEWIDE TOTALS FOR ALL STATE BUDGETED HEALTH-RELATED PROGRAMS:

State	$ 7,975,462
Other	29,925,818
TOTAL	$37,901,280

APPENDICES

APPENDIX A

MONTANA HEALTH PLANNING

Authority

The National Health Planning and Resource Development Act of 1974 (P.L. 93-641) established a national program for health planning. Under this law, Montana has a four-tiered health planning network:

Statewide Health Coordinating Council

State Health Planning and Development Agency

Health Systems Agency

Subarea Councils

There are five subarea councils in Montana and they represent the five Governor's Planning Regions. Figure 1 shows these regions

Responsibilities of Each Planning Level

1. Subarea Councils

   --Provide local input on plans and project reviews.

2. Health Systems Agency

   --Compile and analyze data.

   --Prepare a Health Systems Plan.

   --Prepare an Annual Implementation Plan.

   --Provide technical and/or limited financial assistance to organizations seeking to implement the plans.

   --Assist states in planning for needed medical facilities.

3. State Health Planning and Development Agency

   --Gather and analyze data.

   --Integrate the Health Systems Plan into a draft State Health Plan.

   --Submit the draft State Health Plan to the Statewide Health Coordinating Council for approval.

Figure 1

GOVERNOR'S PLANNING REGIONS

1 — Eastern
2 — North Central
3 — South Central
4 — Southwestern
5 — Northwestern

--Implement those parts of the State Health Plan and the plans of the Health Systems Agency which relate to the government of the state.

--Prepare a State Medical Facilities Inventory.

4. Statewide Health Coordinating Council

--Approve and promote the State Health Plan.

--Review and approve the State Medical Facilities Inventory for consistency with the State Health Plan.

--Review and approve state plans for mental health, and alcohol and drug abuse.

--Review and modify, when necessary, the Health Systems Plan to achieve conformance to the State Health Plan.

These groups also share responsibility for resource development and regulation of new health care facilities and services. The Health Systems Plan, State Health Plan and associated criteria and standards are used to carry out these functions.

Coordination

Coordination with other state plans was carried out by the State Health Planning and Resource Development staff. Advisory task forces were used in the development of the Alcohol Treatment, Long-Term Care and Emergency Medical Care sections of the Plan. These task force groups had representation from government agencies, private providers and consumers.

Before the Plan was adopted by the Statewide Health Coordinating Council, they held public hearings on the Plan in each of the planning regions. Revisions and corrections were then made, the Plan was finalized and submitted to the Governor.

The Governor was represented during the plan development process and the final Plan requires his approval.

Staff

The following staff members of the State Health Planning and Development Agency participated in the development of this Plan:

George M. Fenner	State Health Planning and Development Agency Director
Warren E. Brass	Administrative Officer
Dale Taliaferro	Planning Supervisor
Albert Niccolucci	Data Coordinator and Analyst
Rick Chiotti	Planner
Doris Downs	Office Manager/Statewide Health Coordinating Council Coordinator
Eileen Schubring	Librarian/Graphics
Sherryl English	Administrative Aide/Graphics
Bernie Madura	Contract Employee - Editing

Former employees who also participated in this Plan:

Wallace A. King	Bureau Chief
Audrey Atkinson	Planner
Ellie Rennick	Planner
Carolyn Turcotte	Administrative Assistant

APPENDIX B

HOSPITAL BED NEED PROJECTION METHOD* AND DATA TABLES

The following method and data sources are used to determine projected need for general acute inpatient beds:

$$\text{Bed Need} = \text{ADC} + (3.00/\sqrt{\text{ADC}})$$

ADC is the average daily census of the individual hospital. The bed need for 1985 is projected by estimating the 1985 ADC.

$$\text{ADC (1985)} = \left(\frac{\text{Patient Days}}{365}\right) \quad \left(\frac{\text{Population (1985)}}{\text{Population (1979)}}\right)$$

Patient days are the three year average from 1978 through 1980 taken from the Annual Hospital Reports submitted to the Montana Department of Health and Environmental Sciences.

The 1979 and projected 1985 service populations were computed from the Montana Department of Community Affairs data, using service area data from the 1979 Patient Origin Study from the Bureau of Health Planning and Resource Development, Montana Department of Health and Environmental Sciences.

* Established by the Montana Health Systems Agency

Table A
PROJECTED CHANGES IN HOSPITAL CAPACITY – MONTANA

Region	Excess Beds	Beds Needing Renovation	Beds Needing Replacement	Potential For Reduction	Potential Additions	Remaining Excess Beds
I	111	36	166	73	2	40
II	150	9	-0-	-0-	-0-	150
III	11	17	-0-	8	35	38
IV	148	21	340	115	2	35
V	102	91	282	83	18	37
TOTAL	522	174	788	279	57	300

SOURCE: Bed need for 1985 from Montana Health Systems Agency Formula. Replacement and renovation need from 1981 Montana Data Book.

Table B
HOSPITAL OCCUPANCY RATES – MONTANA

Hospital Bed Size	1980 Beds	1980 Average Occupancy (%)	Projected 1985 Bed Need	Projected 1985 Occupancy (%)
1 - 29	506	36	542	51
30 - 89	760	43	703	66
90 - 189	981	59	939	77
190 +	1,152	69	699	82
State	3,399	56	2,883	71

SOURCE: Occupancy rates computed from Table 1 and Table 2 data.

Table C
SERVICES OFFERED BY MONTANA HOSPITALS

Service	Hospitals With Less Than 30 Beds Offering Service*	Hospitals With 30 Or More Beds Offering Service*
Postoperative Recovery Room	7	27
Coronary Care Unit	6	7
Intensive Care Unit	1	5
CCU/ICU Combined	11	23
Pediatric Intensive Care Unit		1
Open-Heart Surgery Facility		3
Neurosurgery		7
Micro Surgery		5
Cardiac Catheterization Lab		6
Pharmacy W/FT Registered Phar.	1	18
Pharmacy W/PT Registered Phar.	27	11
X-Ray	29	30
Cobalt Therapy		5
Radium Therapy		6
Cystoscopy Services	4	16
Diagnostic Radioisotope Fac.		15
Therapeutic Radioisotope Fac.		9
Histopathology Laboratory		19
Organ Bank		1
Blood Bank	16	23
Electroencephalography		19
Respiratory Therapy Dept.	7	26
Pulmonary Function Lab	1	14
Newborn Nursery	29	25
Premature Nursery	1	11
Self Care Unit		1
Renal Dialysis-Inpatient		4
Renal Dialysis - Outpatient		4
Burn Intensive Care Unit	1	2
Physical Therapy Department	12	26
Occupational Therapy Dept.		9

Table C

SERVICES OFFERED BY MONTANA HOSPITALS

Service	Hospitals With Less Than 30 Beds Offering Service*	Hospitals With 30 Or More Beds Offering Service*
Medical Rehabilitation Unit-In		4
Medical Rehabilitation Unit-Out		4
Chemotherapy	2	12
Cancer Tumor Registry	1	13
Pediatric Care	27	30
Maternity Care	29	27
Psychiatric Care-Inpatient		9
Psychiatric Care-Outpatient		4
Psychiatric Partial Hospitaliz.		3
Psychiatric Emergency Services	1	10
Psychiatric Foster/Home Care	1	1
Psychiatric Consultation Ser.		3
Clinical Psychology Services	1	10
Organized Outpatient Dept.	8	8
Emergency Department	26	30
Toxicology Antidote Inform	1	7
Social Work Department	3	16
Family Planning Service	1	1
Genetic Counseling Service		3
Abortion Service-Inpatient		3
Abortion Service-Outpatient		4
Home Health Care Department	1	4
Dental Services	4	13
Podiatric Services		6
Speech Pathology Services	2	10
Hospital Auxiliary	20	29
Volunteer Services Dept.	6	11
Patient Representative Serv.	1	3
Alcohol Detox. Unit-Inpatient		5
Alcohol Detox. Unit-Outpatient		3
TB and Respiratory Unit		1

Table C

SERVICES OFFERED BY MONTANA HOSPITALS

Service	Hospitals With Less Than 30 Beds Offering Service*	Hospitals With 30 Or More Beds Offering Service*
Neonatal Intensive Care		6
Audiology Services		4
Paramedic Training Program		3
Hospice		4
Autopsy Services	1	11

*Services offered either part- or full-time and either directly or by contract.

SOURCE: Montana Department of Health and Environmental Sciences, Bureau of Health Planning and Resource Development, Montana Annual Survey of Hospitals, 1980.

Table D
HOSPITAL SURGICAL PROCEDURES – MONTANA 1980

Hospital Bed Size	Number Of Hospitals	Total Surgical Procedures[1]	Procedures Per Hospital Bed
1 - 29	30	2,903	6
30 - 89	18	8,591	11
90 - 189	8	26,069	27
190[2] +	4	26,928	28

[1]Includes inpatient and outpatient procedures.

[2]Columbus Hospital in Great Falls did not report and is not included in these counts.

SOURCE: Montana Department of Health and Environmental Sciences, Bureau of Health Planning and Resource Development, Montana Annual Survey of Hospitals, 1980.

APPENDIX C

NATIONAL RESOURCE STANDARD GUIDELINES AND MONTANA FACILITIES--AN EVALUATION

Guidelines concerning health planning policy were issued by the Secretary of Health and Human Services based on Section 1501 of the Public Health Service Act. These guidelines were developed to clarify and coordinate national health policy. These guidelines must be addressed in the Health Systems Plan and the State Health Plan. The guideline standards can be adjusted if local conditions justify such adjustments.

The following discussion covers federal standards, current and projected Montana resource status and Montana standards for these resources.

1. General Hospital - Bed Supply

   Federal Standard: Less than four non-federal, short-stay hospital beds per 1,000 population.

   Montana Status: The following is the current and projected Montana bed ratio:

Year	Beds	Population	Bed/1,000 Pop.
1980	3,399	781,592	4.35
1985	3,405	859,728	3.96

   Montana Standard: Potential bed reductions in association with needed renovations and replacements could reduce the supply by 222 beds. There are currently an estimated 522 excess beds that will still not be needed in 1985. The current bed need formula used by the Health Systems Agency results in a desired bed ratio below 4.0 per 1,000 persons. The number of beds will vary with changes in population use rates, but the 1985 desired level is 3.35 and should not be over 4 under any circumstances.

2. General Hospital - Occupancy Rate

   Federal Standard: Eighty percent average annual occupancy rate for medically necessary procedures.

   Montana Status: The 1980 average annual occupancy rate for Montana hospitals was 56 percent.

Montana Standard: The bed need formula used by the Montana Health Systems Agency takes into account the need to maintain small rural hospitals to provide geographic accessibility. The following are target occupancy rates for 1985 based on bed need computations. If these targets can be reached, it can then be determined whether further improvements are possible.

Hospital Size	Beds Needed In 1985	Resulting Occupancy Rate
Under 30 beds	542	51
30 - 89 beds	703	66
90 - 189 beds	939	77
190 or more beds	699	82
STATE	2,883	71

3. Obstetrical Services - Regionalization

Federal Standard: Planning on a regional basis with linkages among obstetrical and neonatal services.

Montana Status: Regionalization is progressing, although specific regional plans have not been established. A regional manual for perinatal consultation and referral has been developed and implementation is the next step in strengthening the Montana perinatal care system.

4. Obstetrical Services - Minimum Deliveries

Federal Standard: One thousand five hundred births per year in Level II and Level III units.

Montana Status: There are six hospitals in Montana capable of providing obstetrical services for complicated cases. Table A shows the number of births in these hospitals. The Montana Health Systems Plan identifies three of these as Level II services; the others are subject to further evaluation. All of these facilities are considered necessary for the services they offer, whether or not they constitute Level II obstetrical services.

The need for geographic accessibility, coupled with the cost of transportation, makes the cost considerations of the guidelines inapplicable to Montana. Quality of care considerations are still a valid issue, and the regional consultation

Table A

OBSTETRICAL SERVICES IN MONTANA HOSPITALS WITH NEONATAL INTENSIVE CARE UNITS – 1980

Hospital	Births	Obstetric Beds	Obstetric Patient Days	Obstetric Occupancy
St. Vincent's (Billings)	2,311	24	6,550	75%
Montana Deaconess (Great Falls)	1,251	21	4,374	57%
Missoula Community (Missoula)	1,580	21	4,825	63%
St. James Community (Butte)	570	11	1,812	45%
Kalispell Regional (Kalispell)	639	8	1,850	62%
Bozeman Deaconess (Bozeman)	803	12	2,157	49%

SOURCE: Montana Department of Health and Environmental Sciences, Bureau of Health Planning and Resource Development, Montana Annual Survey of Hospitals, 1980.

and referral manual mentioned under Number 3 above should enable institutions to design their programs appropriately.

5. Obstetrical Services - Occupancy

Federal Standard: Seventh-five percent occupancy in units with greater than 1,500 births per year.

Montana Status: The three hospitals that are Level II obstetrical services range from 57 to 75 percent occupancy. Since it is considered appropriate for some Montana Level II services to operate below the 1,500 birth level, lower occupancy levels should also be expected. Because of the small number of beds involved, action to reduce beds is not being considered. The Health Systems Plan recommends consolidation of services where they are duplicated in the same community.

6. Neonatal Special Care Units - Beds per 1,000 Births

Federal Standard: No more than four beds per 1,000 live births in a defined neonatal service area. Table B shows the bed ratio for each planning region. All regions are in conformance with the federal standard and the state ratio is 2.5. Although the number of referrals to out-of-state services is not available, this adjustment should not bring any area or the state above the standard.

7. Neonatal Special Care Units - Regionalization

Rederal Standard: Planning on a regional basis, with linkages with obstetrical services.

Montana Status: Covered under Number 3 above.

8. Neonatal Special Care Units - Beds per Unit

Federal Standard: A minimum of 15 beds for Level II and Level III units.

Montana Status: All units in Montana hospitals are below the 15 bed level. Since these units have been found necessary for geographic accessibility, it is necessary to continue them at the demand level for their particular units.

Table B
NEONATAL INTENSIVE CARE SERVICES – MONTANA 1980

Planning Region	Hospital	Neonatal Intensive Care Beds	Total Births In Region Hospitals	Regional Beds Per 1000 Live Births [1]
Eastern	None		1,469	0
North Central	Montana Deaconess	10	2,538	3.9
South Central	St. Vincent	12	2,921	3.4
Southwestern	St. James	4		
	Bozeman Deaconess	1 5	2,890	1.7
Northwestern	Missoula Community	6		
	Kalispell Regional	3 9	3,406	2.6

[1]Ratio based on resident rather than hospital births.

SOURCE: Montana Department of Health and Environmental Sciences, Bureau of Health Planning and Resource Development, Montana Annual Survey of Hospitals, 1980.

9. Pediatric Inpatient Services - Numbers of Beds

Federal Standard: A minimum of 20 beds in units in urbanized areas.

Montana Status: Montana has two counties designated by the U.S. Census Bureau as Standard Metropolitan Statistical Areas (SMSA). This standard thus applies only in Cascade and Yellowstone counties. Table C shows the pediatric units in these counties. Three of the four units meet the standard, and the other with 19 beds can be considered to meet this standard.

10. Pediatric Inpatient Services - Occupancy

Federal Standard: Minimum average annual occupancy rates by unit size:

Beds	Occupancy
20-39	65%
40-79	70%
80 +	75%

Montana Status: Table C has 1980 occupancy rates for all of Montana's pediatric units subject to this standard. Only St. Vincent Hospital in Billings is known to meet the standard. The Health Systems Plan has recommended consideration of consolidations in communities where there are two underused pediatric units in the same community.

11. Open-Heart Surgery - Procedures per Year

Federal Standard: Minimum of 200 open-heart procedures per year within three years of initiation.

Montana Status: The Montana Health Systems Agency has adjusted this standard to 150 procedures per year due to geographic access considerations. A third unit opened in Great Falls in 1981 and is expected to reach 150 in three years by providing service to patients that would otherwise have gone out of state. (See Table 3, page 70)

12. Open-Heart Surgery - Pediatric Procedures

Montana Status: This standard is not applicable to Montana. There are no pediatric open-heart units in place or planned in Montana.

Table C

PEDIATRIC INPATIENT SERVICES IN URBAN AREAS OR WITH 20 OR MORE BEDS – MONTANA 1980

Hospital	Beds	Inpatient Days	Occupancy
Columbus Hospital (Great Falls)	21[1]	2,972	39%
Montana Deaconess (Great Falls)	20	3,269	45%
St. Vincent Hospital (Billings)	28	7,474	73%
Billings Deaconess Hospital (Billings)	19	--[2]	
Shodair Crippled Children's Hospital (Helena)	20	3,892	53%
St. Patrick Hospital (Missoula)	30	2,314	21%

[1]Number of beds was 21 in 1979, not reported in 1980.

[2]Days not reported.

SOURCE: Montana Department of Health and Environmental Sciences, Bureau of Health Planning and Resource Development, Montana Annual Survey of Hospitals, 1980.

13. Open-Heart Surgery - New Units

Federal Standard: No new units initiated unless each existing unit is operating and is expected to continue to operate at a minimum of 350 procedures per year.

Montana Status: Montana has adopted this standard with the modification that it be applied for the service of an anticipated unit.

14. Cardiac Catheterization - Minimum Procedures

Federal Standard: Minimum of 300 cardiac catheterizations of which at least 200 should be intra-cardiac or coronary artery catheterizations, performed per year in an adult unit within three years of initiation. (See Table 2 page 69)

Montana Status: All four hospitals that offer this service in Montana meet the standard.

15. Cardiac Catheterizations - New Units

Federal Standard: No new units in facilities not performing open-heart surgery.

Montana Status: This standard has been adopted in the Health Systems Plan and the State Health Plan.

16. Cardiac Catheterizations - New Units

Federal Standard: No new additional units unless existing units perform 500 procedures per year.

Montana Status: Same as Number 15 above.

17. Radiation Therapy - Service Population and Procedures

Federal Standard: A megavoltage radiation therapy unit should serve a population of at least 150,000 persons and treat at least 300 cases per year, within three years of initiation.

Montana Status: The Montana Health Systems Plan includes an analysis of cancer treatment facilities and recommends a statewide system for radiation therapy. The current resources include four Cobalt-60 units and two linear accelerators.

The Health Systems Agency's cost analysis indicates that this is less expensive to patients than a conforming system would be.

18. Computed Tomographic Scanners - Minimum Procedures

Federal Standard: Two thousand five hundred medically necessary patient procedures per year during the second year of operation and thereafter.

Montana Status: Need has been determined for enough units in Montana that meeting this standard would encourage their overuse. (See Hospital Specialty Services section of this Plan.)

19. Computed Tomographic Scanners - New Units

Federal Standard: No additional scanners unless existing scanners operate at more than 2,500 procedures per year.

Montana Status: This standard has been found inappropriate for determination of the need for CT scanner services in Montana. (See Hospital Specialty Services section of this Plan.)

20. Computed Tomographic Scanners - Data

Federal Standard: No additional scanners unless the operators of the proposed equipment will set in place data collection and utilization review systems.

Montana Status: This standard has been adopted in the Health Systems Plan.

21. End-Stage Renal Disease - Standards

Federal Standard: The Health Systems Plan should be consistent with standards and procedures contained in the Department of Health and Human Services' regulations governing conditions for coverage of suppliers of end-stage renal disease services.

Montana Status: The 1981 Montana Health Systems Plan is in conformance with this standard.

APPENDIX D

LONG-TERM CARE

LONG-TERM CARE SERVICE DEFINITIONS

CASE MANAGEMENT (Developmental Disabilities)

Case management is provided for developmentally disabled individuals receiving contracted community services from the Developmental Disabilities Division. Services include assisting in assessing client needs and progress, coordinating services, arranging and conducting habilitation plan meetings, client and family counseling and emergency intervention.

HOME HEALTH

Services provided by home health agencies, which may include the following specific services: nursing, medical/social, nutritional guidance, homemaker, occupational therapy, physical therapy, speech and hearing therapy, respiratory therapy.

HOMEMAKER/HOME CHORE SERVICES

Includes assistance and demonstration in meal planning, preparation and food buying, assistance with doctor and dental appointments, shopping for household items and clothing, clothing repair, light household chores and child management.

FOSTER CARE FOR ADULTS

This program promotes and secures foster care in foster and group homes. These services are available to persons age 18 and over who are in institutions and need community placement. This service includes assessment of client needs, counseling, recruiting, evaluating, licensing, and monitoring adult foster homes and community homes.

HEALTH-RELATED SERVICES FOR ADULTS

Services to assist adults to attain and remain in optimum condition of health by assisting in the utilization of necessary medical treatment. Services include helping people to understand their illnesses, arranging for transportation to and from medical services, working with individuals and family members to assure that medical recommendations are followed, and working with medical practitioners to assure that appropriate services are provided.

INSTITUTIONAL PLACEMENT AND COUNSELING

Includes pre-admission screening for nursing homes, monitoring and counseling after placement, developing community placements and community care alternatives for persons presently residing in nursing homes and for persons determined not appropriate for nursing home placement. (All eligible medical components are paid with Title XIX funds.)

LEGAL SERVICES

Includes legal counseling and advice, representation and appeal in civil matters; exclusive of criminal fee generating, probate and bankruptcy cases.

GROUP HOMES FOR YOUTH

Provides live-in group care services to "youth in need of care" and "youth in need of supervision" who are between the ages of 10 and 18. Includes a defined treatment program including counseling and training in social learning skills. Placement is usually limited to three months.

EVALUATION, DIAGNOSTIC, TREATMENT, AND FOLLOW-ALONG SERVICES FOR THE DEVELOPMENTALLY DISABLED

Includes services of a specialized team of professionals who assess the functioning level of developmentally disabled persons and recommend further services. Depending on the client's needs, the assessment team might consist of a physician, psychologist, speech therapist, education specialist and other specialists in DD problems.

RESPITE CARE OF DEVELOPMENTALLY DISABLED PERSONS

Includes in-home and out-of-home care for developmentally disabled persons between the ages of 0 to 6 by trained individuals. It is for a short fixed period of time in order for natural or foster parents to have a vacation from the continuous care of their family member.

TRAINING AND SUPPORT SERVICES FOR FAMILIES WITH DEVELOPMENTALLY DISABLED MEMBERS

Provides training, support services and information to families to assist in the development of care of their child who is developmentally disabled or at risk. Services are offered in the child's own home. This service coordinates with other community services.

DAILY LIVING TRAINING FOR DEVELOPMENTALLY DISABLED PERSONS

Provided for developmentally disabled persons in community group homes and in semi-independent living situations. Includes services designed to meet invididual needs, ranging from training in dressing and bathing to training in money management and use of transportation. Room and board payments may be provided for not more than six months as a part of the service.

SKILLED NURSING CARE

The provision of nursing care services, health-related services, and social services under the supervision of a licensed registered nurse on a 24-hour basis.

INTERMEDIATE NURSING CARE

The provision of nursing care services, health-related services, and social services under the supervision of a licensed nurse to patients not requiring 24-hour nursing care.

PERSONAL CARE

The provision of services and care which do not require nursing skills to residents needing some assistance in performing the activities of daily living.

COMMUNITY HOME FOR THE DEVELOPMENTALLY DISABLED

A family-oriented residence or home designed to provide facilities for two to eight developmentally disabled persons, established as an alternative to existing state institutions. (MCA 53-20-302)

INTERMEDIATE CARE FACILITIES FOR THE DEVELOPMENTALLY DISABLED

"Institutions", or distinct parts thereof, primarily for diagnosis, treatment, or rehabilitation of the developmentally disabled which provide in a protected, residential setting individualized, ongoing evaluation, planning, 24-hour supervision, coordination, and integration of health or rehabilitative services to help each individual reach his maximum of functioning capabilities. (PL 92-603)

SENATE JOINT RESOLUTION NO. 34

Introduced by Senate Public Health Committee
By Hager, Chairman

A JOINT RESOLUTION OF THE STATE AND THE HOUSE OF REPRESENTATIVES OF THE STATE OF MONTANA REQUESTING AN INTERIM STUDY OF LICENSING LAWS REGARDING FACILITIES THAT PROVIDE PROTECTIVE OVERSIGHT, SUPERVISION, PERSONAL CARE, REHABILITATION, AND HEALTH CARE TO THE YOUNG, DISABLED, INFIRM, OR ELDERLY OF THE STATE.

WHEREAS, the licensing laws for ensuring the protection of various groups of young, disabled, infirm, or elderly have been developed in a disjointed manner over the years; and

WHEREAS, the Department of Health and Environmental Sciences, the Department of Social and Rehabilitation Services, and the Department of Institutions have responsibility for licensing and certifying the same or similar facilities and each department may require a different procedure for licensing; and

WHEREAS, federal regulations have required amendments to state statutes; and

WHEREAS, the providers of social and health services are confused about the constant changes in the licensing laws.

NOW, THEREFORE, BE IT RESOLVED BY THE SENATE AND THE HOUSE OF REPRESENTATIVES OF THE STATE OF MONTANA:

(1) That an interim committee be assigned to study licensing laws regarding facilities that provide protective oversight, supervision, personal care, and health care to the young, disabled, infirm, or elderly of the state.

(2) That the study includes but not be limited to a consideration of the licensing laws regarding:

(a) child-care agencies;
(b) licensed day care;
(c) shelter and foster care facilities;
(d) home health care;
(e) long-term care facilities;
(f) adult foster family care homes;
(g) community homes for the developmentally disabled;
(h) residential and transitional living facilities, including rooming houses, boarding homes, and retirement homes;
(i) swing beds; and
(j) alcoholism and drug treatment facilities.

(3) That the Committee examine the possibility of developing a comprehensive licensing law governing all social and health care facilities.

(4) That the Committee report its recommendations and proposed legislation, if any, to the 48th Legislature.

APPENDIX E

GLOSSARY OF HEALTH PLANNING TERMS

"A"

ACCEPTABILITY - An individual's (or group's) overall assessment of medical care available to him. The individual appraises such things as the cost, quality, results, and convenience of care, and provider attitudes in determining the acceptability of health services provided. See also "access" and "availability".

ACCESS - An individual's (or group's) ability to obtain medical care. Access has geographic, financial, social, ethnic and psychic components, and is thus very difficult to define and measure operationally.

ALLIED HEALTH PERSONNEL - Specially trained and licensed (when necessary) health workers other than physicians, dentists, podiatrists and nurses. The term has no constant or agreed upon detailed meaning--sometimes being used synonymously with para-medical personnel, sometimes meaning all health workers who perform tasks which must otherwise be performed by a physician, and sometimes referring to health workers who do not usually engage in independent practice.

AMBULATORY CARE - All types of health services which are provided on an outpatient basis.

ANNUAL IMPLEMENTATION PLAN (AIP) - A plan, which the National Health Planning and Resources Development Act of 1974 (P.L. 93-641) requires health systems agencies to prepare or update annually, specifying, describing how to implement, and giving priority to, short-run objectives which will achieve the long-range goals of the agency, detailed in its health systems plan. Section 1513 of the PHS Act describes the place of AIPs in the larger context of agency functioning.

APPROPRIATENESS REVIEW - Under Section 1513(g) of P.L. 93-641, each HSA must review on a periodic basis (but at least every five years) all existing institutional health services in its health service area, and make recommendations regarding the appropriateness of those services to the SHPDA. A finding of appropriateness means that a service meets the needs of a population, in accordance with criteria established by the HSAs and the SHPDA.

AVAILABILITY - A measure (in terms of type, volume and location) of the supply of health resources and services relative to the needs (or demands) of a given individual or community.

"B"

BED NEED - The number of hospital (or other medical care) beds required for adequate provision of services to a defined population at a specified time.

"C"

CAPITAL EXPENDITURE - An expenditure, which under generally accepted accounting principles is not properly chargeable as an expense of operation or maintenance, for the acquisition, replacement, modernization or expansion of facilities or equipment.

CARDIOPULMONARY RESUSCITATION (CPR) - An emergency technique used to revive victims of cardiac arrest.

CERTIFICATE OF NEED - A certificate issued by a governmental body to an individual or organization proposing to construct or modify a health facility, or offer a new or different health service, which recognizes that such facility or service will be needed.

COINSURANCE - A cost-sharing requirement under a health insurance policy which provides that the insured will assume a portion or percentage of the costs of covered services.

COMMUNITY MENTAL HEALTH CENTER (CMHC) - A facility which provides comprehensive, principally ambulatory, mental health services, primarily to individuals residing or employed in a defined catchment area.

CONSUMER - One who may receive or is receiving health services. While all people at times consume health services, a consumer as the term is used in health legislation and programs is usually someone who is not a provider, i.e., is not associated in any direct or indirect way with the provision of health services.

COST - The total economic value of resources required to provide services, including all financing expenditures, especially expenditures for capital and operating requirements.

CONTINUITY - A measure of the degree of effective coordination of effort in providing services to the patient.

CRITERION - A measurable characteristic of a health service.

"D"

DEBT SERVICE - The payment of matured interest on, and principal of debts; the amount needed, supplied, or accrued for meeting such payments during any given accounting period.

DEDUCTIBLE - The amount of loss or expense that must be incurred by an insured or otherwise covered individual before an insurer will assume any liability for the remaining cost of covered services.

DEVELOPMENTAL DISABILITY (DD) - A disability which: originates before age 18; can be expected to continue indefinitely; constitutes a substantial handicap to the disabled's ability to function normally in society; and is attributable to mental retardation, cerebral palsy, epilepsy, autism, any other condition closely related to mental retardation, or dyslexia resulting from one of the conditions just listed.

DISABILITY - Any limitation of physical, mental or social activity of an individual as compared with other individuals of similar age, sex, and occupation.

"E"

ECONOMIC FEASIBILITY - The capability of a provider organization to meet its financial obligations related to capital investment and operating costs.

EMERGENCY MEDICAL SERVICES SYSTEM (EMSS) - An integrated system of appropriate health manpower, facilities and equipment which provides all necessary emergency care in a defined geographic area. The EMS program in Montana is administered by the Emergency Medical Services Bureau which is a part of the Division of Hospital and Medical Facilities.

EXECUTIVE COMMITTEE - Under P.L. 93-641, a committee of the health systems agency governing body that has authority to take most actions on behalf of the governing body.

EPIDEMIOLOGY - The study of the nature, cause and control of diseases and disability in human populations.

END STAGE RENAL DISEASE (ESRD) - That stage of kidney impairment that requires dialysis or kidney transplantation, or both, to maintain life or health.

"F"

FERTILITY - The ratio of the number of births per year to the number of women of childbearing age, usually between 15 and 45 years of age.

FETAL DEATH - Death of an unborn child.

FETAL MORTALITY - Still births over nineteen weeks gestation.

"H"

HEALTH - Defined by the World Health Organization as "a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity."

HEALTH MAINTENANCE ORGANIZATION (HMO) - Organized system for health care delivery which provides comprehensive medical services to enrolled members for a fixed, prepaid annual fee.

HEALTH PLANNING - A process which establishes desired feature levels for health status and health system performance, designs and selects among alternative actions aimed at modifying the health system, and suggests steps for implementation of the recommended actions.

HEALTH STATUS - The state of health of a specified individual, group or population.

HEALTH SYSTEMS AGENCY (HSA) - A health planning and resources development agency designated under the terms of the National Health Planning and Resources Development Act of 1974, P.L. 93-641. HSAs are non-profit private corporations, public regional planning bodies, or single units of local government.

HEALTH SYSTEMS PLAN (HSP) - A document presenting the decisions of the HSA Board as to broad strategic directions and health resource changes recommended over the next five years or more, to alter the future health system to attain explicitly stated goals and long-term objectives.

"I"

INCIDENCE - The number of new cases of a disease occurring in a specified time period.

INCIDENCE RATE - The number of new cases of a disease divided by the population at risk over a period of time.

INDICATOR - A quantitative measure chosen to reflect the health status of the population or to represent how well the health system is performing.

INFANT MORTALITY RATE - Number of deaths in a year of children less than one year of age divided by the number of live births in the same year; per 1,000 live births.

INFECTIOUS DISEASE - Any disease caused by a pathogenic organism entering the body.

INPATIENT CARE - Services rendered on a 24-hour basis, under the direction of a physician, to patients admitted to a health care facility.

INSTITUTIONAL HEALTH SERVICES - Health services delivered on an inpatient basis in hospitals, nursing homes, or other inpatient institutions, and by health maintenance organizations; but may also refer to services delivered on an outpatient basis by departments or other organizational units of such institutions.

"J"

JOINT COMMISSION ON ACCREDITATION OF HOSPITALS (JCAH) - A private, non-profit organization whose purpose is to encourage the attainment of uniformly high standards of institutional medical care. Comprised of representatives of the American Hospital Association, American Medical Association, American College of Physicians, and American College of Surgeons, the organization establishes guidelines for the operation of hospitals and other health facilities and conducts survey and accreditation programs. On the basis of inspection reports, the hospital may be granted "full accreditation" (for three years), "provisional accreditation" (one year), or none.

"L"

LIFE SAFETY CODE - A fire safety code prepared by the National Fire Protection Association. The provisions of this Code relating to hospitals and nursing facilities must (except in instances where a waiver is granted) be met by facilities certified for participation under Medicare and Medicaid.

"M"

MAINTENANCE SERVICES - Services provided to individuals with chronic physical and mental ill-health conditions in order to prevent deterioration in those conditions, as well as services provided to individuals in need of assistance in activities of daily living.

MEDICAID - Popular name for Title XIX of the 1965 Social Security Act which provides most medical care for persons eligible under various Department of Health and Rehabilitative Services criteria. It generally assists low-income persons of all ages who are unable to provide necessary medical care for themselves.

MEDICARE - Popular name for Title XVIII of the 1965 Social Security Act which authorizes hospitalization and certain other benefits to qualified persons, usually over the age of 62.

MORBIDITY - The extent of illness, injury, or disability in a defined population. It is usually expressed in general or specific rates of incidence or prevalence.

MORTALITY - Death. Used to describe the relation of deaths to the population in which they occur. The mortality rate (death rate) expresses the number of deaths in a unit of population within a prescribed time.

"N"

NATIONAL COUNCIL ON HEALTH PLANNING - A fifteen (15) member advisory council that monitors implementation of P.L. 93-641 and consults with the Secretary of Health and Human Services on development of national health planning guidelines.

NEED - An estimation, based on professional judgement, of the number, type, and level of services and resources necessary to provide for a certain standard of health care.

NEO-NATAL MORTALITY - Death of a child less than twenty-eight days old.

NEONATAL INTENSIVE CARE UNIT (NICU) - A hospital obstetric unit specially equipped and staffed for the care of high-risk newborns and their mothers.

NURSE - An individual whose primary responsibility is the provision of nursing care. A nurse can be defined as a professional person qualified by education and authorized by law to practice nursing. There are many different types, specialties and grades of nurses whose names are generally descriptive of their special responsibilities.

NURSE PRACTITIONER - A registered nurse qualified and specially trained to provide primary health care in homes and in ambulatory care facilities, long-term care facilities and other health care institutions. Nurse practitioners generally function under supervision of a physician but not necessarily in his presence.

PEER REVIEW - The evaluation by practicing physicians or other professionals of the effectiveness and efficiency of services ordered or performed by their peers.

PERINATAL MORTALITY RATE - The number of late fetal deaths (28 weeks or more) plus the number of infant deaths before the seventh day of life divided by the total number of births. This is usually expressed as a rate per 1,000 live births for a given area and time period.

PREVALENCE - The number of cases (diseases) present or existing at a particular time.

PRIMARY CARE - Basic or general health care which focuses on the simpler and more common illnesses.

PROFESSIONAL STANDARDS REVIEW ORGANIZATION (PSRO) - A physician-sponsored organization charged with comprehensive and ongoing review of services provided under the Medicare, Medicaid and Maternal and Child Health programs. The purpose of the review is to determine for purposes of reimbursement under these programs whether services are: medically necessary; provided in accordance with professional criteria, norms and standards; and, in the case of institutional services, rendered in an appropriate setting.

PROSPECTIVE REIMBURSEMENT - Any method of paying hospitals or other health programs in which amounts or rates of payment are established in advance for the coming year, and programs are paid these amounts regardless of the costs they actually incur.

"Q"

QUALITY - A measure of the degree to which health services delivered meet established professional standards and judgements of value to the consumer. Quality is frequently described as having three dimensions: Quality of input resources; quality of the process of the service delivery (e.g., the use of appropriate procedures for a given condition); and quality of outcome of service use (actual improvement in condition or reduction of harmful effects).

"R"

RATE REVIEW - A system for the review of the proposed charges (rates) of health care institutions to determine appropriateness.

REHABILITATION - The coordinated use of medical, social, educational and vocational measures for training or re-training individuals disabled by disease or injury to the highest possible level of functional ability.

"S"

SECONDARY CARE - Services provided by medical specialists who generally do not have first contact with patients (e.g., cardiologists, urologists, dermatologists).

STATE HEALTH PLANNING AND DEVELOPMENT AGENCY (SHPDA) - Section 1512 of the PHS Act, added by P.L. 93-641, requires the establishment of a State Health Planning and Development Agency in each state. As a replacement for existing state CHP agencies, SHPDAs prepare an annual preliminary State Health Plan and the State Medical Facilities Inventory (Hill-Burton). The agency also serves as the designated review agency for purposes of Section 1122 of the Social Security Act and administration of the Certificate of Need program. In Montana, the Bureau of Health Planning and Resource Development is the SHPDA.

STATEWIDE HEALTH COORDINATING COUNCIL (SHCC) - A state council of providers and consumers (who shall be in the majority) which supervises the work of the State Health Planning and Development Agency, and reviews and coordinates the plans and budgets of the HSA. The SHCC will also review applications for HSA planning and resource development assistance.

"T"

TERTIARY CARE - Services provided by highly specialized providers (e.g., neurologists, neurosurgeons, thoracic surgeons, intensive care units). Such services frequently require highly sophisticated technological and support facilities.

THIRD PARTY REIMBURSEMENT - A method for the payment of medical care in which the actual payer is neither the provider nor the recipient of the care.

"U"

UTILIZATION - The amount of use derived from a given health resource (manpower, equipment, etc.) in relation to its maximum potential use.

"V"

VITAL STATISTICS - Statistics relating to births (natality), deaths (mortality), marriages, health and disease (morbidity).

APPENDIX F

ABBREVIATIONS AND ACRONYMS

"A"

AAPS	American Association of Physicians and Surgeons
AB	Aid to the Blind
ADA	American Diatetic Association, American Dental Association
ADAMHA	Alcohol, Drug Abuse, and Mental Health Administration
AFDC	Aid to Families with Dependent Children
AHA	American Hospital Association
AHEC	Area Health Education Center
AHSDF	Area Health Services Development Fund
AIP	Annual Implementation Plan
ALS	Advanced Life Support
AMA	American Medical Association
AMPAC	American Medical Political Action Committee
ANA	American Nurses Association
AOA	American Optometric Association, American Osteopathic Association
APhA	American Pharmaceutical Association
APTD	Aid to the Permanently and Totally Disabled

"B"

BCA	Blue Cross Association
BHI	Bureau of Health Insurance
BHM	Bureau of Health Manpower
BHP&RD	Bureau of Health Planning and Resource Development
BLS	Basic Life Support
BNDD	Bureau of Narcotics and Dangerous Drugs
BQA	Bureau of Quality Assurance
BS	Blue Shield

"C"

C&Y	Children and Youth Project under the Maternal and Child Health Program
CAP	Community Action Program
CCU	Coronary Care Unit
CDC	Center for Disease Control (formerly the Communicable Disease Center)

CER	Capital Expenditure Review
CHAMPUS	Civilian Health and Medical Program of the Uniformed Services
CHC	Community Health Center
CHIP	Comprehensive Health Insurance Plan
CHN	Community Health Network
CMHC	Community Mental Health Center
CMS	Council of Medical Staffs
CON	Certificate of Need
CPHA	Commission on Professional and Hospital Activities
CPI	Consumer Price Index

"D"

DD	Developmental Disability
DDS	Doctor of Dental Surgery
DEA	Drug Enforcement Administration
DESI	Drug Efficacy Study Implementation
DO	Doctor of Osteopathy
DVM	Doctor of Veterinary Medicine

"E"

ECF	Extended Care Facility
EHIP	Employee Health Insurance Plan
EHSDS	Experimental Health Service Delivery System
EMCRO	Experimental Medical Care Review Organization
EMSS	Emergency Medical Services System
EMT	Emergency Medical Technician
EPSDT	Early and Periodic Screening, Diagnosis and Treatment
ER	Emergency Room

"F"

FDA	Food and Drug Administration
FEHBP	Federal Employees Health Benefits Program
FFP	Federal Financial Participation
FHIP	Federal or Family Health Insurance Plan
FICA	Federal Insurance Contributions Act
FMC	Foundation for Medical Care
FMG	Foreign Medical Graduate
FY	Fiscal Year

"G"

GP	General Practitioner

"H"

HASP	Hospital Admission and Surveillance Program
HHS	Department of Health and Human Services
HI	Hospital Insurance Program of Medicare
HIAA	Health Insurance Association of America
HIBAC	Health Insurance Benefits Advisory Council
HMO	Health Maintenance Organization
HRA	Health Resources Administration
HSA	Health Service Area, Health Services Administration, Health Systems Agency
HSMHA	Health Services and Mental Health Administration
HSP	Health Systems Plan

"I"

ICDA	International Classification of Diseases, Adapted
ICF	Intermediate Care Facility
ICF/MR	Intermediate Care Facility for the Mentally Retarded
ICU	Intensive Care Unit
IOM	Institute of Medicine of the National Academy of Sciences
IPA	Individual Practice Association
IPR	Independent Professional Review

"J"

JCAH	Joint Commission on Accreditation of Hospitals
JUA	Joint Underwriting Association

"L"

LOS	Length of Stay
LPN	Licensed Practical Nurse
LVN	Licensed Vocational Nurse

"M"

MAC	Maximum Allowable Cost
M&I	Maternal and Infant Care Project under the Maternal and Child Health Program
MCH	Maternal and Child Health
MMIS	Medicaid Management Information System
MR	Mentally Retarded
MSA	Medical Services Administration

"N"

NABSP	National Association of Blue Shield Plans
NACo	National Association of Counties
NAMH	National Association for Mental Health
NARC	National Association of Retarded Citizens
NBME	National Board of Medical Examiners
NCHS	National Center for Health Statistics
NCHSR	National Center for Health Services Research
NHI	National Health Insurance
MHSC	National Health Service Corps
NIH	National Institutes of Health
NIMH	National Institute of Mental Health
NLN	National League for Nursing
NMA	National Medical Association
NP	Nurse Practitioner

"O"

OAA	Old Age Assistance
OASDHI	Old Age, Survivors, Disability and Health Insurance Program
OEO	Office of Economic Opportunity
OMB	Office of Management and Budget
OPD	Outpatient Department
OR	Operating Room
OSHA	Occupational Safety and Health Act
OT	Occupational Therapy or Therapist
OTA	Office of Technology Assessment

"P"

PA	Physician Assistant, Proprietary Association
Part A	Hospital Insurance Program of Medicare
Part B	Supplementary Medical Insurance Program of Medicare
PAS	Professional Activities Survey
PDR	Physicians' Desk Reference
PHS	U.S. Public Health Service
PHS Act	Public Health Service Act
PNHA	Physicians' National Housestaff Association
PSRO	Professional Standards Review Organization
PT	Physical Therapy or Therapist
POMR	Problem Oriented Medical Record

"Q"

QAP	Quality Assurance Program

"R"

RHA	Regional Health Administrator (HHS)
RMP	Regional Medical Program
RN	Registered Nurse

"S"

SHCC	Statewide Health Coordinating Council
SHP	State Health Plan
SHPDA	State Health Planning and Development Agency
SMFI	State Medical Facilities Inventory
SMI	Supplementary Insurance Program of Medicare
SMSA	Standard Metropolitan Statistical Area
SNF	Skilled Nursing Facility
SRS	Social and Rehabilitation Services
SSA	Social Security Administration
SSI	Supplemental Security Income

"T"

Title XVIII	Medicare
Title XIX	Medicaid

"U"

UCR	Usual, Customary and Reasonable
UR	Utilization Review
USP	United States Pharmacopeia
USPHS	United States Public Health Service

"V"

VA	Veterans Administration
VNA	Visiting Nurse Association

"W"

WHO	World Health Organization

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